University of Santa Clara

Catalogue

1918-1919

SANTA CLARA, CALIFORNIA

MAY. 1918

ADMINISTRATION BUILDING, UNIVERSITY OF SANTA CLARA

University of Santa Clara

CATALOGUE

1918-1919

SANTA CLARA, CALIFORNIA
MAY. 1918

The Corporate Title of the University is

THE PRESIDENT AND BOARD OF TRUSTEES OF SANTA CLARA COLLEGE

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CHARLES M. LORIGAN, Esq.

Consulting Attorney,

CHARLES M. LORIGAN, Esq.
San Jose, Cal.

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CALENDAR

1918

Aug. 19, Monday.	
	Registration of non-resident students, 9 a. m.
	Registration of resident students, 1:30 p. m.
	(Fee for late registration $1.00.)
Aug. 20, Tuesday.	
	Classes begin at 2:30 p. m.
	Classes begin in Institute of Law at 6:55 p. m.
Aug. 24, Saturday.	Examinations begin for removal of Conditions.
Sept. 2, Monday.	Labor Day; a holiday.
Oct. 12, Saturday.	Columbus Day; a holiday.
Nov. 1, Friday.	Feast of All Saints; a holiday.
Nov. 25, Monday.	Feast of St. Catharine; a holiday for Philosophers in the College of Letters.
Nov. 26, Tuesday.	Thanksgiving vacation begins at 3:30 p. m.
Nov. 29, Friday.	Thanksgiving vacation ends at 6 p. m.
Dec. 3, Tuesday.	Repetitions begin in all classes.
Dec. 10, Tuesday.	Examinations begin for students who were conditioned before graduation.
Dec. 18, Wednesday.	Mid-year examinations begin.

Dec. 21, Saturday.	Christmas vacation begins at 3:30 p. m.
1919	
Jan. 6, Monday.	Christmas vacation ends at 6 p. m.
Jan. 7, Tuesday.	Second semester begins.
Jan. 13, Monday.	Examinations begin for removal of conditions.
Jan. 27, Monday.	St. John Chrysostom's day; a holiday for Sophomores in the College of Letters.
Feb. 2, Sunday.	Students' Retreat begins at 6:20 p. m.
Feb. 6, Thursday.	Students' Retreat ends; a holiday.
Feb. 22, Saturday.	Washington's Birthday; a holiday.
March 8, Saturday.	Last day to submit subjects for graduation theses in all departments, and Sophomore Essays.
March 15, Saturday.	Donohoe Prize Contest in Latin and Greek Composition.
March 17, Monday.	St. Patrick's Day; a holiday.
March 18, Tuesday.	Ryland Debate.
April 8, Tuesday.	Archbishop's Medal Contest in Christian Doctrine.
April 12, Saturday.	Last day to submit essays for Redwood Prizes.
April 15, Tuesday.	Last day to submit essays for Orella Medal.
	Oratorial and Elocution Contest for Owl and Junior Prizes.

April 16, Wednesday	Easter vacation begins at 3:30 p. m.
April 21, Monday.	Easter vacation ends at 6 p. m.
May 2, Friday.	Last day to submit Graduation Theses.
	Last day to submit Essays for McCann Prizes.
	Barchi Medal Contest in Mathematics.
	Repetitions begin for Seniors in Colleges of Letters, Science, Engineering and High School.
May 3, Saturday.	Repetitions begin for Juniors in Letters, Science, and Engineering.
May 5, Monday.	Last day to submit Sophomore Essays.
	Repetitions begin for Sophomores in Letters and Science.
May 10, Saturday.	Written examinations begin for Seniors in Letters and Science.
May 13, Tuesday.	Written examinations begin for Juniors in Letters and Science.
	Oral examinations begin for Seniors.
May 16, Friday.	Written examinations begin for College of Engineering, Sophomore and Freshmen in Letters and Science, and for all High School classes.
	Oral examinations for Juniors begin.

	Oral examinations in Law begin.
	Oral examinations begin for Sophomores in Letters and Science.
May 20, Tuesday.	Baccalaureate Mass and Sermon.
	Oral examinations for College of Engineering begin.
May 21, Wednesday.	Commencement.

FACULTY OF THE UNIVERSITY

WALTER FRANCIS THORNTON, S. J.

President.

JOSEPH ALOYSIUS SULLIVAN, S. J.

Vice-President, Director of Discipline, President of the Philalethic Senate, President of the Senior Dramatic Society.

CORNELIUS ALOYSIUS BUCKLEY, S. J.

Dean of the Faculties, Director of Studies, Director of the School of Pedagogy.

JOSEPH WILLIAM RIORDAN, S. J.

Secretary, Treasurer, Speaker of the House of Philhistorians.

DOMINIC M. GIACOBBI, S. J.

Chaplain, Director of the Sodality of the Immaculate Conception, and the League of the Apostleship of Prayer, Instructor in Italian.

WILLIAM HENRY DRISCOLL, S. J.

Professor of Ethics, Theodicy, History of Philosophy and Political Economy.

WILLIAM MICHAEL BOLAND, S. J.

Professor of Logic, Metaphysics and Psychology.

NICHOLAS PETER BELL, S. J.

Professor of English, Latin and History.

RICHARD HENRY BELL, S. J.

Professor of Physics.

JEROME SIXTUS RICARD, S. J.

Director of the Astronomical, Meteorological and Seismological Observatory.

FIRMIN EUGENE CHANAL, S. J.

Professor of French, Spanish, and Analytic Geometry; Librarian, Registrar.

HENRY LOUIS WALSH, S. J.

Professor of English in the College of Engineering, Instructor in Plane Geometry, Faculty Moderator of Athletics, Assistant Director of Discipline.

EDWARD JOSEPH WHELAN, S. J.

Professor of English, Latin and Greek; Director of the St. John Berchmans Sanctuary Society for Resident Students; Director of the Holy Angels' Sodality; Faculty Moderator of the "Redwood."

JOHN JOSEPH GEARON, S. J.

Instructor in Trigonometry and Geometry.

FRANCIS JOSEPH McGARRIGLE, S. J.

Professor of Inorganic Chemistry, Geology and Mineralogy; Assistant Professor of Biology.

JOSE GONZALES, S. J.

Professor of Organic Chemistry and Biology.

GABRIEL MARIE MENAGER, S. J.

Professor of Greek, Instructor in French, Director of the University Choir.

JOHN CLEMENT WARD, S. J.

Instructor in English, Latin, Algebra, History and Civil Government.

JOSEPH FRANCIS McELMEEL, S. J.

Instructor in English, Latin and History; Moderator of High School Athletics.

PETER MASTEN DUNN, S. J.

Professor of English in the College of Engineering, Instructor in English, Latin and History; President of the Junior Dramatic Society.

THOMAS JOHN LANNON, S. J.

Instructor in English, Latin and History.

JAMES FRANCIS DOYLE, S. J.

Instructor in English, Latin and Greek.

JAMES HENRY CAMPBELL, Ph. D., J. D.

Dean of the Institute of Law; Professor of Law.

JOHN EVAN RICHARDS, A. D., LL. B.

(Associate Justice of the District Court of Appeal for the First Appellate District of California.)

Presiding Judge of the District Court of Appeal of the University, Institute of Law.

WILLIAM ARTHUR BEASLY, LL. B.

(Judge of the Superior Court of California, for the County of Santa Clara.)

Judge of the Superior Court of the University, Institute of Law.

FRANK HOBART BLOOMINGDALE, LL. B.

Professor of Law.

NICHOLAS BOWDEN, LL. B.

Professor of Law.

CLARENCE CHARLES COOLIDGE, B. S., A. B., J. D.

Professor of Law.

JOHN JOSEPH JONES, A. B., LL. B.

Professor of Law.

MAURICE JOHN RANKIN, LL. B.
Professor of Law.

OWEN DALE RICHARDSON, A. M., LL. B.
Professor of Law.

JAMES PETER SEX, Ph. D., J. D.
Professor of Law.

CURTIS HOLBROOK LINDLEY, LL. D.
Lecturer in Law.

JOSEPH LAVIALLE DONOVAN, U. S. A. Retired, C. & M. E.
Professor of Military Science and Tactics, Professor of Civil Engineering.

GEORGE LEONARD SULLIVAN, M. E., Ph. D.
Professor of Mechanical-Electrical Engineering.

EDWARD ALEXANDER REINKE, B. S.
Assistant Professor of Electrical Engineering.

DAVID WILLIAM RIPLEY,
Instructor in Mechanical Engineering.

JULIAN JEREMIAH GRIMES, A. B., A. C. T., London,
Professor of Architecture and Mathematics.

DOXEY ROBERT WILSON, M. D.,
Professor of Histology, and Embryology.

JOSEPH ROBERT FERNANDEZ,
Instructor in Spanish.

ALBERT HENRY SCHUH, A. F. M. (Stuttgardt)
Professor of German, Instructor in Music.

BARTHOLOMEW RICHARD SULLIVAN, B. S.
Instructor in Accountancy, Commercial Law, Business Practice and Stenotypy.

GERALD MORLEY DESMOND,
Instructor in Shorthand and Typewriting.

SAMUEL JOSEPH MUSTOL, B. Mus.,
Director of Music; Leader of the University Band and Orchestra.

FREDERICK GERLACH, M. S., M. D.
Visiting Physician and Surgeon.

ANTHONY STANISLAUS PEREIRA, S. J.
Infirmarian.

UNIVERSITY OF SANTA CLARA

LOCATION.

The University is situated in the Mission town of Santa Clara, in Central California, forty-eight miles south of San Francisco and three miles from San Jose. The valley of Santa Clara is famous throughout the world for the beauty of its scenery, the salubrity of its climate, and the excellence of its fruits. The climate is mild and equable both in summer and winter, and on that account singularly favorable for persistent study and research as well as for the maximum of agreeable out-of-doors recreation which such work makes necessary. There is one well-defined rainy season, lasting from December to April, in which about fifteen inches of rain usually fall. Snow is almost unknown in the valley and falls on the surrounding hills hardly oftener than three times a year, melting almost as soon as it appears. Thirty degrees is normally the lowest temperature experienced in winter nights and this rises to about 55 degrees at noon. The average mid-day temperature in summer is about 70 degrees; it ranges between 60 and 80 degrees, and occasionally rises higher. Even the warmest days are followed by cool nights of which the usual temperature is 55 degrees.

FOUNDATION.

The University of Santa Clara is located on the site of the Old Mission of Santa Clara, Santa Clara, California.

On January 12, 1777, two Franciscan Padres, de la Pena and Murguia, planted the Mission Cross on the banks of a little stream, called from that time the Guadalupe, at a spot now forming a part of the Laurel Wood Farm, near Agnew. Two years later, a flood destroyed both church and monastery, and the Padres in consequence sought a site on higher ground near the present railway station of Santa Clara.

There, on November 9, 1781, they laid the foundation of a large adobe church and mission buildings. Three years later, on May 15, 1784, the new church was dedicated, by the Venerable Padre Serra, then Padre Presidente of all the Missions of California.

This church, however, was so badly shattered by several earthquakes in 1812 and 1818, that the Padres were forced to build anew. This time they chose the site which the University now occupies. There, on August 11, 1822, a still larger church was dedicated, which did service for many years till the violent earthquakes in the years 1865 and 1868 so cracked and weakened it that extensive repairs were necessary. By the year 1885 it had been almost entirely removed, having been gradually replaced by the present frame building, the interior of which is a nearly perfect reproduction of its predecessor and retains some of the old ornaments and furniture and the ceiling of the sanctuary.

The Mission of Santa Clara was secularized in 1836 and passed from the hands of the devoted Padres into those of politicians, who, in dealing with the helpless Indians violated God's laws of right and justice, as well as the laws of the Mexican government in whose name they ruled. Santa Clara was soon robbed of her lands, and her children were oppressed or driven away to the forests.

When Rt. Rev. Joseph Sadoc Alemany, O. P., arrived, as Bishop of the Diocese of San Francisco in 1850, he found only one Franciscan in charge of the mission, which had been restored by the American government, though in a sadly reduced form, most of the land being occupied by squatters.

Desiring to save the remnants of the mission, and also to begin a college to meet the growing need of the times, the Bishop invited the Society of Jesus to Santa Clara. The invitation was accepted, and accordingly on March 19, 1851, the Rev. John Nobili, S. J., laid the foundation of the University of Santa Clara and began the work.

Fr. Nobili adapted the old adobe buildings to the requirements of a school, and in a few years numerous students were in attendance. On April 28, 1855, the institution was chartered a University and continued for many years to be known as Santa Clara College.

In 1904, during the presidency of Father Robert E. Kenna, S. J., a large tract of land was bought at Mountain View, with the intention of transferring the college thither, but, owing to the lack of financial support, nothing was done.

After careful consideration it was decided, in 1910, that this plan would have to be abandoned and that it was much wiser to improve the College in its present location and thus make the most of the equipment it then had. Accordingly, in 1911, two new reinforced concrete buildings, in the mission style, were begun.

As early as 1907, lectures were commenced with a view of preparing students to enter upon the professional courses in law, medicine and engineering. By 1911, the pre-medical course was thoroughly established and the law school was begun. Realizing, therefore, that the college was practically doing the work of a University, the President, Fr. James P. Morrissey, S. J., and the Board of Trustees, decided to adopt officially the name of "The University of Santa Clara", and this decision was publicly announced on April 29, 1912. Later, on June 16, 1912, with appropriate ceremonies, in the presence of Most Rev. Patrick W. Riordan, D. D., Archbishop of San Francisco, of many present and former students, and of 30,000 spectators, with a pageant illustrative of the history of California and Santa Clara, the two new buildings were dedicated.

In the summer of 1912, engineers of high standing were engaged to carry on the courses in engineering, and in the next summer a thoroughly equipped laboratory for engineering was prepared. In the same year the amount of work required of law students was increased and almost all classes in Law were thenceforth held at night.

THE PRESENT.

The number of students is steadily increasing, but, owing to the fact that only a limited number can be accommodated this growth of Santa Clara is greatly hampered.

Even more pronounced than this material growth has been the improvement wrought in the student body by the judicious selection of applicants for admission. The principle of the Faculty has been to receive and retain no one whose habits are not irreproachable. Today parents realize that education which neglects manners is a mistake and that a university which overlooks or takes little account of morals is a monstrosity.

CONSTITUENT COLLEGES.

The University now possesses the following constituent Colleges:

The College of Philosophy and Letters;
The College of General Science;
The Institute of Law;
The College of Engineering, embracing Architectural, Civil, Electrical and Mechanical Engineering;
The School of Pedagogy; and
The Pre-Medical Course.

FUNDS AND NEW BUILDINGS.

The growth in the number of students has made it imperative in recent years to provide ampler and more substantial accommodations. For this, and in

order that Santa Clara may widen its scope as an educational institution of recognized standing, funds are necessary. Santa Clara stands in imperative need of an endowment. The work the University has accomplished in the past is an earnest of what she will do when increased facilities are afforded her.

An endowment, however, implies a founder or founders and benefactors. During the past few years, many have helped the University and generous donations have been made. The Administration building, 200x43 feet, and the Senior Hall, both in reinforced concrete, are completed. But before other buildings for which the plans of the University provide, may be added, further benefactors will be needed. Other educational institutions, even those state-aided and richly endowed receive generous assistance in the work and hesitate not to ask it. Santa Clara feels that generous friends are not lacking, though for the want of deeper thought on the matter, few realize the importance of Christian educational work, the immense sacrifice it entails, and the merit there is in co-operating and sharing with Christian educators in their work for God and Country and the welfare of the young men of our generation who are to become the leaders of the generation of tomorrow. The faculty of the University has given its life-services freely and gladly to the work. Those who would share with them in this great enterprise can do so most effectively by rendering material aid and contributing funds for the continuance and development of the work.

FORM OF BEQUEST.

I give and bequeath unto the President and the Board of Trustees of Santa Clara College, a corporation duly incorporated under the laws of the State of California, a sum of.....dollars.

SYSTEM OF EDUCATION.

The Jesuit system of education aims at developing side by side the moral and intellectual faculties of the student, and sending forth to the world men of sound judgment, of acute and rounded intellect, of upright and manly conscience. And since men are not made better citizens by the mere accumulation of knowledge, without a guiding and controlling force, the principal faculties to be developed are the moral faculties. Moreover, morality is to be taught continuously; it must be the underlying base, the vital force supporting and animating the whole organic structure of education. It must be the atmosphere the student breathes. It must suffuse with its light all that he reads, illuming what is noble and exposing what is base, giving to the true and false their relative light and shade.

STUDIES.

It is one of the decided advantages of the system followed at Santa Clara, that the student may begin his studies in the Preparatory School conducted under the supervision of the University authorities, and then pass on, through the University Courses, to graduation under the same direction and influence. This secures, besides the moral influence thus gained, a uniform and homogeneous course of teaching and training. The re-

sult of this system is a continuous and normal development of the mental faculties along well defined lines, and the possession of a clear and coherent system of principles upon the subjects which are studied.

BUILDINGS.

The Mission Church.

Built on the site of the old Mission Church of 1822, this building preserves many of the relics and decorations of the Franciscan days, though most of the walls have been removed.

The Memorial Chapel.

As a memorial of deceased students this handsome chapel was erected in 1887, during the presidency of Rev. Father Robert E. Kenna, S. J., through the generosity of many alumni and friends of Santa Clara College.

Senior Hall.

This hall, built in 1912 of reinforced concrete, furnishes on the second and third floors, private rooms for the older students. On the first floor are seven large class-rooms for College Classes, the Law Library and Study Hall, and the College of Engineering. In the basement are a large social hall, Senior Reading Room, the Practice Court of the Institute of Law, the Palaeontological Museum and the Armory.

The Theatre.

All dramatic productions at Santa Clara since 1870, including the Passion Play and the Mission Play of Santa Clara, have been presented in this theatre. Its

stage is one of the largest for amateur productions in the West. The lower floor is fitted up as a Dormitory for older students.

The Literary Congress Building.

For a time the meeting place of the House of Philhistorians and the Philalethic Senate was in this building. Now it houses the Philalethic Senate, the Department of Chemistry, and is used to some extent as a substitute for a Gymnasium.

The Scientific Building.

The First and Second Division Study Halls, the Typewriting Room, the Physical Cabinet and Laboratory, the Mineralogical Museum, the Biological Laboratory and Lecture-rooms, and the Laboratory for Wireless Telegraphy are housed in this building.

The Commercial Building.

This building contains the High School class-rooms and study hall, the Commercial School, the Physical Laboratory for the High School, and the Drafting room of the Architectural Department of the College of Engineering.

The Infirmary Building.

This structure, with its several wings, comprises the Kitchen, the Refectories, the Infirmary with private rooms and ward, Dormitories for younger students, Clothes-room, and the Students' Co-operative Store, rooms for the individual practice of Music, and the Band-room.

The Observatory.

The equatorial telescope, the seismographs and various meteorological instruments, and the study of the Father in charge, are housed in four small buildings.

The Faculty Building.

This structure of reinforced concrete built in 1912, to replace the old Fathers' Building which was destroyed by fire in 1910, contains the offices of the chief executive officers of the University, parlors, the residence of the Fathers and Scholastics who are attached to the University or the Parish of Santa Clara, and the Library of the University.

The Engineering Laboratory.

Forges, machinery for wood-working and pattern-making, etc., used in the courses of the College of Engineering find place in this building.

Athletic Field.

This includes the grounds devoted to intercollegiate contests in baseball and football. It contains some fifteen acres of field and lawn.

Outer Campus.

Three city blocks in front of the Administration Building and Senior Hall give room for two large baseball diamonds and football fields for the Junior and other minor organizations.

Inner Campus.

This field located between Senior Hall and the Scientific Building contains the track, tennis courts, handball courts, etc.

SESSIONS, HOLIDAYS, HOURS.

The school year consists of two semesters.

The first semester begins August 19th, 1918, and ends December 21st, 1918.

The second semester begins Jan. 7th, 1919, and ends May 21st, 1919.

The recess at Thanksgiving begins Nov. 26th, 1918, and ends Nov. 29th, 1918.

The recess at Christmas begins December 21st, 1918, and ends Jan. 6th, 1919.

The recess at Easter begins April 16th, 1919, and ends April 21st, 1919.

The weekly holiday is Wednesday.

Lectures and classes begin daily at 8:05 a. m., and close at 3:05 p. m.

In the Institute of Law, class is held every evening at 6:55. Every evening, including Wednesday, there are two periods of class in legal subjects, each of which lasts from one to one and one-half hours.

FACULTY COMMITTEES

Examinations—

Sophomore—The Professors of Sophomore and Freshman Courses.

Junior—The Director of Studies, and the Professors of the Junior Courses.

Senior—The President, the Director of Studies, and the Professors of the Senior Courses.

Theses—The Director of Studies and the Professors of Junior and Senior Courses.

Athletics—The Director of Discipline, the Director of Studies and the Faculty Director, assisted by the Officers of the Student Body.

Attendance—The Director of Studies, and the Director of Discipline.

Discipline—The Director of Discipline, the Assistant Director of Discipline and the Director of Studies.

Dramatics and Public Exercises—The President, the Director of Studies, the Director of Discipline, and the President of the Senior Dramatic Club.

"The Redwood"—The Director of Studies, the Faculty Director guiding the staff, and the Professors of Philosophy and English.

Post-Graduate Studies—The President, the Director of Studies, and the Professors of the subjects in which the Post-Graduate work is taken.

Scholarship and Standing—The Director of Studies, and the Deans of the several Colleges.

SCHOLARSHIPS

Every year deserving young men of high character and aspirations, whose means do not permit their attending the University, appeal to the Faculty for assistance to obtain the education for which their talents and vocation fit them. There is scarcely a university in the United States which is not provided with a fund for this purpose, and a relatively large percentage of successful college men spring from the class of assisted students. It is clearly a noble benefaction to contribute to such a purpose in any case. But this is especially so in the case of those who apply for help to the University of Santa Clara. They are as a rule young men of high standing, who understand the paramount value of an education in a university which aims at the highest intellectual development of the student, while devoting no less attention to the perfect development of his moral character. As a consequence it follows that to assist them in attaining their desire is to aid picked young men whose future is more than ordinarily full of promise, and who are destined to exert a most powerful influence on those among whom their lives will be spent.

It is the intention of the Faculty of the University of Santa Clara to make an earnest effort to supply this pressing need, by establishing free scholarships for resident and non-resident students, so that worthy young men may receive the help they desire. For this purpose an appeal is made to all who appreciate the importance of the matter.

The Scholarships to be founded will be of two classes, perpetual and temporary. By establishing a perpetual scholarship the donor will maintain one student at the University of Santa Clara in perpetuity. A temporary scholarship will maintain one student at the University during the four years of his course. The amount contributed will be invested in reliable securities, the interest of which will support the student. The cost of founding Scholarships is as follows:

Perpetual Scholarship for a resident student—board, lodging, etc., tuition, text-books $12,500.00

A perpetal Scholarship for a day student—tuition and text-books ..... $ 3,000.00

A temporary Scholarship for a resident student—board, lodging, tuition, text-books, for four years ..... $ 2,000.00

A temporary Scholarship for a day student—tuition, text-books, etc., for four years..... $ 500.00

It is the desire of the Faculty to name these scholarships after their founders, that thus the recipients of their generosity may know to whom they are indebted for their education, and ever retain grateful remembrance of them.

THE ALICE PHELAN SULLIVAN MEMORIAL SCHOLARSHIP.

This perpetual scholarship for a resident student was founded in 1912 by the gift of $12,500 from "A Friend" in memory of Mrs. Alice Phelan Sullivan of San Francisco.

THE JESSE W. BRYAN MEMORIAL SCHOLARSHIP.

This perpetual scholarship for a resident student was founded in 1913 by the gift of $12,500 by Mrs. Sarah A. Bryan, in memory of her son, Mr. Jesse W. Bryan, a former student of Santa Clara.

GENERAL REGULATIONS

No one will be admitted as a student unless he has a good moral character.

Candidates for admission must present satisfactory recommendations. Those from other educational institutions must be recommended by the institutions whence they come. For scholarship requirements cf. Graduate and Undergraduate Departments.

To cultivate the heart, no less than to develop the intellectual and physical faculties of the students, is a duty kept constantly and sacredly in view.

Students are not received for a shorter period than one semester.

As the Faculty of the University profess the Catholic Religion, the exercises of religious worship are Catholic; but members of any religious denomination are received, provided they be willing, for the sake of order and uniformity, respectfully to conform to the religious observances of the University.

No student will be permitted to leave the University on visits of any length, except during the vacations of Thanksgiving, Christmas and Easter, if such be the wish of his parents or guardian. Parents are requested not to call their sons home at other times, except in cases of urgent necessity, as such interruptions, besides tending to undermine or prevent the acquisition of habits of concentration and persevering work, are apt to result in poor scholarship and in the consequent wrecking of the whole career of the student.

A recess at Thanksgiving and Easter may be given at the discretion of the President.

Students taking Collegiate courses, whose homes are not in the neighborhood, must reside within the University unless they are accompanied by their parents.

Students who, having left the University for the summer vacation, Christmas holidays, or other recesses allowed by the President, fail to be present on the day for the re-opening of class, will, by the fact of absence, be excluded from the University, or at the discretion of the Faculty from privileges until the following semester, particularly the privilege of visiting friends and relatives on the Second Wednesday, unless parents or guardians show cause of absence which the Faculty shall consider wholly sufficient.

The students are not allowed the use of tobacco, except in First Division with written permission from parents or guardians.

Students are not permitted to have books or other publications that have not been approved by the Vice President.

The students' correspondence is subject to the inspection and control of the President.

To hold meetings or to form clubs or societies of any kind without the consent of the President, the habitual use of profane language, unbecoming conduct either within or without the precincts of the Institution, the possession or distribution of indecent publications or pictures, intoxication, procuring or introducing intoxicating liquors, directly or indirectly into the University, habitual idleness and violation of the rules of the University, obstinate refusal to submit to

a punishment inflicted, absence from the University at night without leave from the President, avowed principles of infidelity, express contempt or ridicule of religion, are offenses which expose the offenders to dismissal or suspension, as in the judgment of the Faculty shall be deemed necessary.

EXPENSES IN ALL THE DEPARTMENTS OF THE UNIVERSITY

RESIDENT STUDENTS.

Matriculation fee, paid at entrance	$ 15.00
Tuition, Board and Lodging, per semester	200.00
Athletic fee, per semester	2.50

NON-RESIDENT STUDENTS.

Tuition in High School Course, per semester	30.00
Tuition in University Course, per semester	50.00
Athletic Fee, per semester	2.50
Dinner, per semester	40.00

EXTRA EXPENSES.

Late Registration.

Registration after opening day of semester	1.00

Private Rooms.

If used by one, per semester	60.00
If used by two, per semester, each	30.00
Room deposit	10.00

A few rooms are reserved at a higher rate.

No room will be assigned until a room-deposit of $10.00 will have been made. This deposit is to cover any injury that may be done to room or furniture. If no damage be done, the deposit will be returned when the student gives up the room. Rooms will be given to those students only who pay the full rate.

Books.

Deposit for books by law students ..... $ 35.00
Deposit by those not law students 10.00

Non-Resident Students pay in cash. Books and stationery are furnished at dealers' rates.

Laundry Expenses.

Laundry expenses will constitute extra charges. To cover such expenses a deposit, per semester, will be required of ..... $ 20.00

Laboratories.

Physics and Chemistry in Collegiate Course, per semester ..... $ 12.50
Pre-Medical Course, per semester 25.00
Engineering, Freshman, per semester 12.50
Engineering, Sophomore, per semester 20.00
Engineering, Junior, per semester 25.00
Engineering, Senior, per semester 25.00
A deposit in all Laboratories against breakage, per semester 5.00

Music.

Instruction in Music, per semester ..... $ 40.00

Modern Languages.

Free to students in regular Course; to others, per semester ..... $ 10.00

Typewriting.

Per semester ..... $ 5.00

Stenotypy.

Per semester ..... $ 15.00

Diplomas and Certificates.

Commercial Certificates	$ 5.00
Degrees and other Certificates	10.00

No Certificate or Degree is given unless all accounts with the University have been settled.

Extra Examinations.

For each extra examination to remove a condition, or for any examination taken out of time	$ 2.00
For each syllabus (synopsis of a semester's work in any subject furnished by the teacher)	.50

Pocket Money and Incidentals.

The amount of Pocket Money and money for incidentals is left entirely to parents and guardians. The University prefers that parents deal directly with the Students. Should, however, parents or guardians wish the Treasurer of the University to look after these matters, they must deposit a sufficient amount with him and instruct him how the money is to be used. The University does not advance money for these purposes.

Infirmary Charges.

No charges are made for the ordinary attendance of the University Physician. Medicines are charged at cost prices. For a room in the Infirmary a dollar a day is charged.

Uniforms.

The students will be required to have two uniforms. The complete cost with military shirt, cap and shoes, will be about thirty-seven dollars and a half each. This price is very moderate considering the cost, at present, of articles of dress. One uniform will be the personal property of the student. On the other, the government will make an allowance; and while the student will be permitted the free use of the uniform, the uniform itself will be government property up to the end of the school year, and then belong to the student. A deposit of seventy-five dollars to cover the expense of uniforms will be required of each student on entering the University for the year's work, and the amount allowed by the government will be refunded to parents, as soon as it is received.

The University refunds nothing on uniforms that have been used by students. Should, however, such uniforms be purchased by other students through the commissary department, whatever is received for them will be sent to parents.

Students already having one uniform will be required to get but one other. See Military.

Payments.

PAYMENTS MUST BE MADE HALF-YEARLY IN ADVANCE. IN SPECIAL CASES, HOWEVER, QUARTERLY PAYMENTS MAY BE ARRANGED FOR.

It is unpleasant to press friends and patrons for payment. Remittances should be made in the name of the University of Santa Clara. Semester bills and

unpaid balances are subject to sight draft ten days after the bill is rendered.

Rebates.

Grievous sickness necessitating absence from the University beyond a month is the only reason on account of which a rebate is allowed. Late attendance, dismissal, the withdrawal of students by parents or guardians and similar happenings, are serious inconveniences to the University, and hence contracts are made for sessions and not for shorter periods.

An itemized bill is furnished once every semester.

When a pupil is withdrawn temporarily or permanently from the University, the President must be directly informed, and money supplied for travelling expenses.

A limited number of student helpers may be received at reduced rates.

A HEALTH REQUIREMENT IS EXACTED.

All students are subject to examination by the University physician.

EVERY APPLICANT

should forward to the President a certificate of the studies he has completed with a testimonial as to his character and diligence, signed by the head of the school last attended. Where the applicant has received a degree, or has been otherwise graduated, he should present his diploma or its equivalent, duly signed by the proper authorities of the school that issued it.

The articles which every student coming to reside at the University should bring with him are, more or less: two pairs of sheets, three pillow cases, two counterpanes, a sufficient number of shirts, drawers, handkerchiefs, socks, shoes, napkins, towels, combs, brushes. These must be all marked distinctly with the student's name before he registers.

Promptness in reaching the University on the day fixed for the opening of classes is necessary. It is essential that Parents and Students understand this clearly from the beginning of their connection with the University, as promptness in returning from vacations and recesses, which is requisite in order to prevent the loss of valuable time and the forming of habits of procrastination and negligence of duty, is strictly insisted on.

GENERAL PROVISIONS REGARDING SCHOLARSHIP AND STANDING.

Attendance.

No student is eligible to enter any examination, written or oral, nor is he entitled to credit, unless he has been in attendance at 80 per cent of the classes, but students in the Institute of Law must have been in attendance at 90 per cent of the classes. Absence caused by sickness will not excuse a student from the operation of this rule.

Written Examinations

Are held monthly in all subjects and in all departments. They are also held twice a year upon the work seen during the preceding semester.

Oral Examinations

At the end of the scholastic year must be passed by the following classes of students.

1. Students finishing Sophomore year in the College of Letters or the College of Science must be examined in English and Latin for fifteen minutes in each subject and in Greek (or a Modern Language), ten minutes.

2. Students who have followed the course in Elementary Law for one semester or more must be examined therein for ten minutes.

3. All students, regular or special, who have followed the courses in Philosophy and Political Economy, or any part thereof, must be examined therein for twenty minutes.

4. All students, regular or special, in the Institute of Law, the Pre-Medical Courses, the School of Pedagogy, and all other courses open to Juniors and Seniors in the College of Letters or the College of Science, except Philosophy and Political Economy which have been provided for above, must be examined in the subjects pertaining to such schools or courses, for forty minutes.

5. All students in the Commercial Department, as a final test for graduation, must be examined for thirty minutes in all subjects taught in that Department, or in such of those subjects as the examiners may choose.

No student may be orally examined unless he has passed satisfactorily all the written examinations given at the end of each semester on the matter seen therein, or having been conditioned on the first semester examination, has removed the condition; nor unless in addition to the preceding requirement he has received a passing grade on the whole year's work in every subject studied.

The examination must extend to all the work done during both semesters in the subjects indicated; but if the student was present during only one semester, the examination covers the work of that semester only.

The examination is to be conducted privately before a board of the Faculty who may increase the time alloted to any examination if they see fit. It does not determine the grade of a student's standing, but neither promotion nor credit is given without a successful pass.

Promotions.

A student to be promoted in any subject must have

attained an average of at least 70 per cent on the whole year's work in that subject.

This average is computed as follows, all work being marked on the basis of 100 for perfect work.

Class-work plus monthly examination divided by two gives the monthly mark.

The sum of five monthly marks and five times the semester examination mark, divided by ten gives the semester mark.

The sum of the marks for the first and second semester divided by two gives the mark for the whole year's work.

Where an oral examination is required, the student cannot be promoted or graduated unless he attains therein the passing mark of 70.

Special regulations as to the grades to be maintained by law students, candidates for degrees and certificates, will be found under "Institute of Law, Graduation."

Conditions.

A mark of 60 to 70 indicates a condition.

When Conditions May Be Removed.

Where a student is conditioned in an examination given at the end of the first semester, he will not be re-examined until approximately two months after his failure. Unless this condition is removed upon re-examination, the student will not be admitted to the final examinations at the end of the year.

Where a student is conditioned in a written or oral examination, given at the end of the school year, he will not be re-examined until the beginning of the next

school year; provided however, that where a student is conditioned in a written or oral examination given as one of the final tests before graduation, he will not be re-examined until six months after receiving the condition.

Where a student has been re-examined in any subject to remove a condition or reach a certain average, another examination may be permitted in the discretion of the Faculty; but in no case may it be taken until two months have elapsed since the former examination. If the student fails to reach the required average no further examination will be allowed.

See also "Failures" below, for pre-requisites to re-examination.

Any student who enters the Senior year of any of the Colleges with a condition, will have the status of a special student unless this condition is removed within one month after the opening of the University for the first semester.

Failures.

A mark of less than 60 indicates a failure.

A failure in a subject means that the student must repeat the work in class the next time it is given.

A conditioned student who fails to pass a satisfactory examination at the time set for condition examinations, receives a failure in the subject.

If the condition is received in a Bookkeeping or a Laboratory course, the student must make up the work in which he is deficient before the time of the condition examinations, or receive a failure.

Fee for Condition and Irregular Examinations.

For every examination, written or oral, given out of

the regular time, or to remove a condition, an extra charge of two dollars is made.

Recommendation to Other Schools.

No student will be recommended for entrance into any other University, College or High School who has not maintained an average of 85 per cent in every subject throughout his course.

No credit can be given for work done during any semester in which the student has not been present at eighty (or in the Institute of Law, ninety) per cent of the classes.

Candidacy for Degree or Certificate.

Every person who wishes to become a candidate for a degree or certificate in the work of any school connected with the University, must, not later than one month after his entrance, file with the Committee of Scholarship and Standing a written statement of the degree or certificate to which he aspires and the work which he proposes to do. He will then be informed whether he may be admitted as a candidate for such degree or certificate and whether the work proposed is satisfactory. Any change of purpose must be similarly announced.

Electing Studies.

All students must inform the Director of Studies in writing as to their choice of subjects, and no one may enter upon a course or drop one already taken up without his advice and consent, upon penalty of receiving no credit in the first case and a condition in the subject dropped, in the second.

Registration Card.

Before registering for instruction in any department, the student must obtain a card signed by the Treasurer of the University, showing that a satisfactory settlement of the student's account has been made. This card is handed to the Director of Studies from whom the student must obtain another blank, write thereon the subjects elected and approved, and present it to his professors for their signature. This registration card is then returned to the Director of Studies, to be filed in his office.

WRITTEN WORK.

The following written work is required of the students, in all the classes indicated:

All students in the courses of Philosophy and Political Economy must write and deliver to their professor every month an essay of not less than 1500 words, on a subject selected by him from the matter lately studied.

In all classes of Mathematics, three groups of problems are to be set weekly.

In all classes of English, a composition, essay, or poem, and two written exercises in addition, are to be given in weekly by the students.

In all classes in Modern Languages, there shall be as many written exercises as there are classes.

In classes of Latin and Greek three themes are to be handed in each week. See Latin (3, 6, 9), College of Letters.

All of these out-of-class exercises will be corrected

by the teacher, either in class or out of it, and returned to the students.

PRIZES.

Prizes are awarded in all classes and in all subjects, to the students who are first and second in merit.

Students whose yearly average is 85 per cent or over are given distinctions.

No student is eligible for an ordinary prize who has not been present for the whole year.

EXTRAORDINARY PRIZES.

The following extraordinary prizes are open to competition on the dates announced in the University Calendar. The Faculty Committee of Scholarship and Standing reserves the right not to award any of these prizes in the absence of sufficient competition or a meritorious grade of scholarship. No one is eligible to compete a second time for a prize which he has already won, except after an interval of one year.

Senior Nobili.

An annual prize of $60.00 founded by Joseph A. Donohoe, Esq., in honor of the First President of Santa Clara, Fr. John Nobili, S. J., to be given to the student in University Courses who shall be deemed first in morals, obedience and in application to study.

Junior Nobili.

An annual prize of $35.00 founded by Michael H. Kelly, Esq., to be given to the student in the High School Department who shall be deemed first in morals, obedience and application.

The Archbishop's Medal.

An annual prize of $50.00, the gift of His Grace, Most Rev. Edward J. Hanna, D. D., Archbishop of San Francisco, in memory of his illustrious predecessor, Most Rev. Patrick William Riordan, D. D., for the student who shall have competed most successfully in an examination in Christian Doctrine.

The Donohoe Prize.

An annual prize of $50.00, to be awarded to the student who shall show the greatest progress in the study of Latin and Greek during the session, has this year been set aside for the best Latin Composition and divided into three purses of $25.00, $15.00 and $10.00, respectively.

The Ryland Prizes.

An annual prize of $25.00, the gift of Hon. C. T. Ryland of San Jose, to be given to the student who may be deemed by the University most fit for the prize, has been set aside for the student who shall be judged to have distinguished himself most in the Annual Ryland Debate between the Senate and House which constitute the Literary Congress, organized February 22, 1857. By an agreement between these societies, in alternate years one of them selects a question for the Ryland Debate and the other is allowed the choice of the side it will defend. This year the subject for debate was chosen by the House. To this sum John W. Ryland, Esq., B. S. '77, LL. B., '12, has added the sum of $60.00, and the prize has been divided so that the purses offered are now $50.00 for the best speaker in the debate, $25.00 as a second prize and $15.00 as a third.

The Barchi Prize.

An annual prize of $25.00 founded by Joseph M. Durney, Esq., for the best paper on such scientific subject as shall be determined by the Faculty, is divided into two purses of $15.00 and $10.00 respectively.

The McCann Prize.

Annual prizes of $15.00 and $10.00 founded in honor of Daniel B. McCann, B. S. '84, to be given for the best short story.

The Redwood Prize.

An annual prize of $25.00 founded in 1908 by the executive committee of "The Redwood", and given for the best essay on a historical subject.

The Owl Prize.

An annual prize of $25.00 founded by the directors of the former College Magazine, "The Owl", to be given to the winner of the oratorical contest in the University.

The Junior Elocution Prizes.

Annual prizes of $15.00 and $10.00 to be given to the winners of the elocution contest in the High School Department.

The Orella Medal.

A medal of the value of $25.00, founded by Dr. Firmin R. Orella, B. S., '89, to be given to the writer of the best paper on a scientific subject.

The Donovan Prizes.

Prizes donated by Colonel Joseph L. Donovan, U. S. Army, Ret., C. & M. E., of the faculty of the College of

Engineering: $25 for the best Senior thesis in Civil Engineering; $10 for the best Senior paper in Civil Engineering Design; $10 for the best Junior paper in Civil Engineering Design; $20 for the best examination in Sophomore Engineering Mathematics; $10 for the best examination in Freshman Engineering Mathematics.

The Silver Medals for Conduct and Application to be given to the following students who become most distinguished for good conduct and application to study:

1. The most distinguished **resident University** student.
2. The most distinguished **non-resident University** student.
3. The most distinguished **resident High School** student.
4. The most distinguished **non-resident High School** student.

The "Cyc" Prize.

A prize of a complete set of "Cyc" (the Cyclopedia of Law and Procedure) with annotations to date, is offered by the American Law Book Company to the student of the Institute of Law who shall take the highest scholarship honors for the period of his Senior year, including the oral examination.

The Corpus Juris Scholarships.

The American Law Book Company also offers three scholarships, to be known as the "Corpus Juris Scholarships," each of the value of $500, payable in four equal payments of $125 each, for the purpose of one

year's resident post-graduate work, at a school approved by the Company. The scholarships are to be awarded as follows:

The Company will choose a committee of law school professors to submit some subject for a thesis to the honor man of each law school having a regular course of three or four years. The best three of these theses submitted to and judged by the committee of law school professors will win the three "Corpus Juris Scholarships."

This offer begins with the year 1915-16 and will continue annually until further notice.

DEPARTMENTS OF THE UNIVERSITY

DEPARTMENTS, CURRICULA, COURSES.

The University includes the Graduate and Undergraduate Departments.

GRADUATE DEPARTMENT.

Aim and Scope.—The Graduate Department offers students who have attained the Academic Degrees, studies leading to the higher ones of Master or Doctor. The determination of these courses rests with the Committee on Post-graduate Studies. A sufficiently wide option is allowed, much of the instruction being in the form of direction along lines of original research.

Courses may be had in Philosophy, Sociology and Economics, English, Latin, Greek, and Mathematics, as well as in the Pre-Medical course and the Professional Colleges of Law and Engineering.

Graduates who have received the degree of Bachelor of Arts or Bachelor of Science, may receive the degree of Juris Doctor on completing the course of the Institute of Law and prescribed work in Roman Law, International Law and the History of English Law. For A. M. 248, 229½ or 199 credits are required according as Law, Pre-Medical or Pedagogy electives have been taken in addition to Philosophy, History of Philosophy and Thesis, which are the special work demanded for this degree. From these thirty-four units must be selected. For Ph. B. 252, 233½, or 212 units are required after the degree of A. B. has been awarded, and

248, 229½, or 199 if B. S. has been awarded, the different number of units required being determined by the different requirements in Law, Pre-Medical and Pedagogy. The special requirement for this degree is research work in Ancient, Scholastic and Modern Philosophy to the amount of thirty-four units. For Ph. D. the requirement is the same as for Ph. B with thirty-four additional units of theoretical and experimental work and thesis. For Lit. B., the work required for A. B. must be completed by thirty-four units in History and Criticism of English Literature and thesis.

The prescribed course of Military Instruction and Training, when entered upon by any student, shall, as regards such student, be a prerequisite for graduation.

UNDERGRADUATE DEPARTMENTS.

These include:

A. THE COLLEGE OF PHILOSOPHY AND LETTERS.

A four years' college course, leading to the degree of Bachelor of Arts.

B. THE COLLEGE OF GENERAL SCIENCE.

A four years' college course, leading to the degree of Bachelor of Science.

C. THE INSTITUTE OF LAW.

A standard three years' course of law, leading to the degree of Juris Doctor or Bachelor of Laws, which is open also to Special students.

D. THE COLLEGE OF ENGINEERING.

(a) Architectural Engineering. A four years' course leading to the degree of Bachelor of Science in Architecture.

(b) Civil Engineering. A four years' course leading to the degree of Bachelor of Science in Civil Engineering.

(c) Mechanical Engineering. A four years' course leading to the degree of Bachelor of Science in Mechanical Engineering.

(d) Electrical Engineering. A four years' course leading to the degree of Bachelor of Science in Electrical Engineering.

E. THE SCHOOL OF PEDAGOGY.

A course of studies in Education which aims at preparing graduates of the University for capable service in the field of high school education.

F. THE PRE-MEDICAL COURSE.

A two years' course of studies in Chemistry, Biology, Histology and Embryology, which is recommended to students contemplating entrance into medical schools.

ENTRANCE REQUIREMENTS.

Applicants for admission to the Freshman Year in any College of the University must either (1) have completed the regular Four-Year High School course of the Preparatory School of the University, or (2) have completed a similar course in an accredited High

School, or (3) pass an examination based on a four-year course amounting in the aggregate to sixteen units. Of these sixteen units, ten or more are prescribed and required of all applicants; the rest are elective from the list of optional subjects.

CONDITIONS.

In certain cases, at the discretion of the Committee on Entrance Standing, which shall decide on the merits of each particular case, conditions in elective branches to the amount of not more than two units may be allowed. All conditions must, however, be removed by the end of the Freshman year.

As the prescriptions in the classical languages are difficult for secondary schools to meet, two conditions may be permitted in these languages in cases of special merit.

The following is a list of the units required for entrance into the respective Colleges.

COLLEGE OF PHILOSOPHY AND LETTERS.

Subjects Prescribed.

English	3 units
History	2 units
Latin or Modern Language	4 units
Greek or Modern Language	2 units
Algebra	1½ units
Geometry	1½ units

Electives.

Physics	1 unit
Chemistry	1 unit
Modern Languages	2 units
History	2 units
Trigonometry	½ unit

COLLEGE OF GENERAL SCIENCE.

Subjects Prescribed.

English	3 units
History	2 units
Modern Languages	2 units
Algebra	1½ units
Geometry	1½ units

Electives.

Physics	1 unit
Chemistry	1 unit
Modern Languages	2 units
English	1 unit
History	2 units
Trigonometry	½ unit

COLLEGE OF ENGINEERING.

Subjects Prescribed.

English	3 units
History	2 units
Modern Languages	2 units
Algebra	1½ units
Geometry	1½ units

Electives.

Physics	1 unit
Chemistry	1 unit
Modern Languages	2 units
English	1 unit
History	2 units
Trigonometry	½ unit

To count a "unit" a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of not less than thirty-six weeks.

INSTITUTE OF LAW.

Entrance Requirements and Conditions of Graduation Are fully set out on pages 151 and 160 of this catalogue.

Colleges of Philosophy and Letters and General Science

COLLEGE OF PHILOSOPHY AND LETTERS.

The College of Philosophy and Letters covers a curriculum of four years and leads to the Degree of Bachelor of Arts. It comprises courses of studies selected with special regard to their cultural value, and which, far from being of merely cultural importance, afford the most solid foundation for many of the learned professions and for those larger commercial pursuits characteristic of the present age, which demand intellects carefully trained and poised by the most efficient educational instruments available. The Degree of Bachelor of Arts is awarded only to those students who in addition to other prescribed studies present a minimum of four years of Greek and six of Latin.

During the first two years of this curriculum the chief studies are the classical languages and literatures, English, Mathematics, Physics, Chemistry and History. In the last two years courses in Philosophy, Ethics and Economics are prescribed, and elective work, which counts as two years for the Degree of Bachelor of Arts, may be taken in the Institute of Law, in the Pre-medical Course, in the School of Pedagogy, and other departments of the University.

COLLEGE OF GENERAL SCIENCE.

The Curriculum of the College of General Science extends over four years and leads to the Degree of Bachelor of Science. Students whose preparatory training in the classics was not sufficient to warrant their entrance into the College of Philosophy and Letters are eligible to this curriculum, in which, with the excep-

tion of the classical literatures, for which modern languages and literature are substituted, are contained all the strong studies of the curriculum of the College of Philosophy and Letters.

At the beginning of the third or Junior Year in this course students may enter the Institute of Law, the Pre-medical Course, the School of Pedagogy or elect other studies from the University curricula to the amount of two year's work in credits for the Degree of Bachelor of Science, work in any of these departments being accepted towards the credits necessary for the degrees of A. B., B. S., LL. B., and J. D.

REQUIREMENTS FOR GRADUATION.

One credit is given for each hour's work in a subject taken during an entire semester, except that for two hours of laboratory work, only one credit is given.

For the degree of A. B., when the elective work of Junior and Senior years is taken in the Institute of Law, 218 credits are required for graduation; if the elective work is taken in the Pre-Medical course 199½ credits are required; and if it is taken in the School of Pedagogy 178 credits are required.

For the degree of B. S., with the Law electives, 214 credits are required, 195½ with the Pre-Medical electives and 174 with the Pedagogy electives. The subjects in all these courses are obligatory after the choice of an elective is made and no substitution is allowed.

Theses—Before one is admitted to any degree in any Department, or to a certificate in Law, a thesis must be submitted on a subject chosen by the student with the approbation of the Committee on Theses It must

bear on the matter studied, or at least on cognate matter, and shall consist of no fewer than 5000 words. The theses should be typewritten on National White unruled paper, 8½x11 inches. The ultimate decision as to whether the effort merits the Degree rests with the Committee on Theses.

Military Instruction and Training. The prescribed course of Military Instruction and Training, when entered upon by any student, shall, as regards such student, be a prerequisite for graduation.

REQUIRED COURSES.

Required Courses in the College of Philosophy and Letters and in the College of General Science.

FRESHMEN YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
English Precepts, Eng. (1)	3		3
English Composition, Eng. (5)			2
†Religion, Phil. Relig. (1)	2		2
History, History (1)	3		3
Public Speaking, Eng. (14)	1		1
Advanced Algebra, Math. (3) or	3		3
Plane Trigonometry, Math. (1)	3		3
Latin, Latin (4, 5, 6)	5		5
Greek, Greek (1, 3)	4		4
*Modern Language, two of either French (1), German (1), or Spanish (1)	8		8
Inorganic Chemistry, Chem. (1, 2, 3)	3	4	5

Second Semester.

	Hours Attendance Rec.	Lab.	Credits.
English Precepts, Eng. (2)	3		3
English Composition, Eng. (6)			2
†Religion, Phil. Relig. (2)	2		2
History, History (2)	3		3
Public Speaking, Eng. (14)	1		1
Spherical Trigonometry, Math. (2)	3		3
Latin, Latin (1, 2, 3)	5		5
Greek, Greek (2, 3)	4		4
*Modern Language, two of either French (2), German (2), or Spanish (2)	8		8
Inorganic Chemistry, Chem. (4, 5, 6)	3	4	5

*Two modern languages may be substituted for Latin and Greek in the Colleges of General Science and Philosophy and Letters.

†Required only from students professing the Catholic faith.

SOPHOMORE.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
English Precepts, Eng. (3)	3		3
English Composition, Eng. (7)			2
†Religion, Phil. Relig. (3)	2		2
History, Histy. (3) or	3		3
Elementary Law, See page 152	3		3
Public Speaking, Eng. (15)	1		1
Analytic Geometry, Math. (4)	3		3
Latin, Latin (7, 9)	5		5
Greek, Greek (4, 6)	4		4
*Modern Language, two of either French (3), German (3), or Spanish (3)	8		8
Physics, Physics (1, 3)	3	4	5

Second Semester.

	Hours Attendance Rec.	Lab.	Credits.
English Precepts, Eng. (4)	3		3
English Composition, Eng. (8)			2
Thesis, Eng. (9)			5
†Religion, Phil. Relig. (3)	2		
History, Histy. (4) or	3		3
Elementary Law, See page 152	3		3
Public Speaking, Eng. (15)	1		1
Analytic Geometry, Math. (5)	3		3
Latin, Latin (8, 10)	5		5
Greek, Greek (5, 6)	4		4
*Modern Language, two of either French (4), German (4), or Spanish (4)	8		8
Physics, Physics (2, 4)	3	4	5

*Two modern languages may be substituted for Latin and Greek in the Colleges of General Science, and Philosophy and Letters.

†Required only from students professing the Catholic faith.

JUNIOR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Logic, Phil. (1)	5		5
Ontology, Phil. (2)	3		3
Philosophy of Religion, Phil. Relig. (4)	2		2
Political Economy, Pol. Econ. (1)	2		2
Elective; Law, Law (1, 4, 6, 7, 8) Page 153	14		14
Elective; Pre-Medical, Pre-Med. (1a, 1b, 2a)	6	8	10
Elective; Pedagogy, Pedagogy (1, 2)	4		4

Second Semester.

	Hours Attendance Rec.	Lab.	Credits.
Psychology, Phil. (3)	8		8
Philosophy of Religion, Phil. Relig. (4)	2		2
Political Economy, Pol. Econ. (2)	2		2
Elective; Law, (2, 3, 5, 7, 8)	14		14
Elective; Pre-Medical (1a, 1b, 1c, 2b)	6	8	10
Elective; Pedagogy, Ped. (3, 4)	4		4

SENIOR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Ethics and Theodicy, Phil. (3)	8		8
Political Economy, Pol. Econ. (3)	2		2
Philosophy of Religion, Phil. Relig. (5)	2		2
Elective; Law (See page 154)	14		14
Elective; Pre-Medical (3a, 3b, 5a, 5b)	4	7	7½
Elective; Pedagogy, Ped. (5, 6)	4		4

Second Semester.

	Hours Attendance Rec.	Lab.	Credits.
Ethics and Theodicy, Phil. (4)	8		8
Political Economy, Pol. Econ. (4)	2		2
Thesis, Phil. (6)			5
Philosophy of Religion, Phil. Relig. (5)	2		2
Elective; Pre-Medical (3a, 4a, 4b, 5a, 5b)	5½	9	10
Elective; Law (See page 154)	14		14
Elective; Pedagogy, Ped. (6, 7)	4		4

THIRD YEAR OF LAW

Subjects and time allotment will be found on pages 154—159.

PHILOSOPHY.

(1) Logic.

Five Credits. Five Hours, One Semester.

(a) Dialectics. Simple Apprehensions. Terms—their Supposition, definition and division. Judgements. Propositions—Classification according to Quantity and Quality; Opposition, Equivalence, Conversion. Reasoning,—underlying Principles. The Syllogism; its Laws and its Species. Induction. Method. The Circle.

(b) Critics. Logical Truth and Falsity. States of the mind as to truth. Certitude: Degrees, Elements. Kinds. Scepticism, Universal and Partial. Consciousness. The Senses. Nominalism, Conceptualism, Realism, Ultra-Realism. Testimony. Tradition, history. The New Criticism. Reason and Revelation. The Ulti-

mate Motive of Certitude. Evidence. Shallo's Scholastic Philosophy.

(2) Basic Ontology.

Three Credits. **Three Hours, One Semester.**

(a) Basic Ontology. Being. Analogy. Axioms. Unity, Identity, Distinction—Real and Logical. Truth. Goodness, Evil. Act and Potentiality. Essence and Existence. Possibility, Extrinsic, Intrinsic. Sources of the latter. Substance—Complete, Incomplete. Hypostasis, Person. Accident—Absolute, Relative. The Categories of Aristotle.

(b) Ontology and Etiology. The Principle. The Cause. The Condition. The Occasion. Matter—Primordial and Secondary. Form—Substantial, Accidental. Efficiency and Action. Finality. The Order of Intention and the Order of Achievement. The Exemplar. Grades of Perfection. Beauty.

(c) Cosmology. Qualities of Bodies. Quantity—Discrete and Continuous. Mathematical Divisibility. Formal Effect. Impenetrability. Space. Place. Change —Substantial, Accidental. Motion and Time. Laws of Nature. Atomism, Dynamism, Hylomorphism.

(d) Biology. Organic Life Defined. Vegetable Functions. The Vital Principle in the Plant. Its Superiority to Anorganic Forces. Sensation,—External, Internal. Imagination, Memory, Instinct, Sleep. The Rank of the Animal Soul. Origin of Species. Theory of Independent Formations. Monistic Evolution. Darwinism.

Text for (a), (b), (c) and (d) Shallo's Scholastic Philosophy.

(3) Psychology.

Eight Credits. **Eight Hours, One Semester.**

(a) The Intellect. Genesis of Ideas. Self-consciousness. Judgement and Reasoning. Hypothesis of Innate Ideas. Empiricism. Ontologism. (b) The Will. Freedom. Arguments. Control over Faculties. (c) The Soul. Substantiality, Simplicity, Spirituality, Immortality. The Unity of Each Individual. Union of Body and Soul. Origin of the Human Soul. Traducianism. Creationism. Pre-existentianism, Unity and Antiquity of the Race. Maher's Psychology.

(4) Theodicy and General Ethics.

Eight Credits. **Eight Hours, One Semester.**

(a) Existence and Nature of God. (a) Metaphysical, Physical, Moral Proofs. Aseity. Infinity, Immensity. (b) Life of God. Intelligence. The Futuribles. Will —Primary and Secondary Object. Moral and Physical Evil. (c) Action of God in the Universe. Creation, Conservation, Concurrence, Providence. Miracles.

(b) General Ethics. Nature, Object, Necessity of Ethics. Teleology, Beatitude. Human Acts. Voluntary and Involuntary Acts. Morality of Human Acts and its Determinants. Passions. Habits. Moral Obligation and its Origin. Eternal Law. Natural Law. Sanction of Law. False Norms of Morality. Utilitarianism. Hedonism. Altruism. Rickaby's Moral Philosophy.

(5) Special Ethics.

Eight Credits. **Eight Hours, One Semester.**

Duties, Worship. Internal and External Worship. False Worship. Homicide. Self-defense. Suicide.

Dueling. Veracity. Charity. Rights. Private Ownership. Communism. Socialism. Agrarian Socialism. Henry George. Herbert Spencer. Capital and Labor. Domestic Society. Matrimony. Divorce. Celibacy. Parental Authority, Education. Relation of Master and Servant. Civil Society, its Nature and Origin. False Theories of Hobbes, Rousseau, Locke. Forms, Scope, Aim, Functions of Civil Government. Suffrage. Liberty of Opinion, of the Press, of Worship, of Association. International Law. Church and State. Rickaby's Moral Philosophy.

(6) Thesis.

Five Credits.

A thesis of at least 5000 words on a subject chosen by the student with the approval of the Dean of the Faculties and the Professor. The thesis will be governed by the general regulation for theses on page 59. Its completion is a necessary pre-requisite for taking the oral examination in this department.

POLITICAL ECONOMY.

(1) Definition.

One Credit. **Two Hours, One-Half Semester.**

Method. Schools. Wealth. Value, Price. Production and Factors of Production. Exchange. Burke, Political Economy.

(2) Money and Prices.

One Credit. **Two Hours, One-Half Semester.**

Gresham's Law. Bimetallism and Monometallism.

Inflation. Contraction. Depreciation. Multiple Tender. Credit. Burke, Political Economy.

(3) Banks and Banking.

One Credit. **Two Hours, One-Half Semester.**

The Banking system of the United States and those of some other countries. Remedies for the present system of banking. International Trade. Balance of trade and accounts. Protection and Free Trade. Transportation. Railroads. Government Ownership. Corporations. Trusts. Burke, Political Economy.

(4) Revenue.

One Credit. **Two Hours, One-Half Semester.**

Taxation. Public Debts. Insurance. Spending. Saving. Poverty. Distribution. Rent. Interest. Profits. Wages. Burke, Political Economy.

SOCIOLOGY.

(1) Socialism and Trade Unions.

One Credit. **Two Hours, One-Half Semester.**

A lecture course dealing with the history, development and trend of Socialism and Trade Unionism. This course involves copious collateral reading and the verification of inferences by investigation into the aspirations and methods of present day representatives of the movements studied.

(2) Capitalism.

Two Credits. **Two Hours, One Semester.**

A course dealing with the history and estimation of

accumulated private wealth and following it to its present day forms and characteristics.

(3) Condition of the Wage Earners.

One Credit. **Two Hours, One-Half Semester.**

This course examines into the actual condition of the working classes and implies an investigation into the helpful and hindering influences which affect the workers and the consideration of the efficacy of present day methods for the betterment of the condition of the wage-earners.

(4) Co-operation. Competition and Combination.

One Credit. **Two Hours, One-Half Semester.**

A more critical and profound examination into the basic principles of present day economic institutions and of the reforms suggested to remedy their defects.

PHYSICS.

(1) Mechanics, Molecular Physics, Sound.

Three Credits. **Three Hours, One Semester.**

General principles of matter. General properties of Bodies. Equilibrium. Gravity. The balance. Laws of falling bodies. Pendulum. Properties peculiar to Solids. Hydrostatics. Capillarity, endosmose, diffusion, absorption. Hydro-dynamics. The property of gases. Aerodynamics. Production, propagation and reflection of sound. Measurement of the number of vibrations. The physical theory of music. Reed & Guthe's College Physics.

(2) Light, Heat, Electricity.

Three Credits. **Three Hours, One Semester.**

Transmission, velocity, intensity and reflection of light. Mirrors. Single refraction. Lenses. Dispersion and achromatism. Optical instruments. The eye. Sources of light. Phosphorescence. Double refraction. Interference and polarization. Properties of magnetism. Methods of magnetism. Laws of magnetic action. Terrestrial magnetism. Fundamental principles of frictional electricity. Quantitative laws of electric action. Distribution. Electrostatic induction of influence. Electric machines. Condensation of electricity. Voltaic cell. Its modifications. Magnetic field due to current. Galvanometers. Ohm's law. Conversion of electric energy into heat. Thermo-electricity. Electro-dynamics. Electro-magnets. Magnetization of iron. Telegraphy. Electro-magnetic induction. Passage of electricity through gases. Magneto- and dynamo-electric machines. Diamagnetism. Connection between electricity and light. Physiological action of the current. Animal electricity. Reed & Guthe's College Physics.

(3) Physical Measurements.

Two Credits. **Four Hours, One Semester.**

The use of scales. The straight and barometer vernier. The spherometer. Micrometer wire gauge. The Cathetometer. The micrometer and compound microscope. Angular measurements. The circular vernier, the optical lever. Poggendorff's method and the spirit level. Estimation of mass. General theory of the balance. Weighing by vibrations. Exact weights

and errors in weighing. Measurement of area and volume. Determination of density. Relative densities. Elasticity, tenacity and capillarity. Determination of atmospheric pressure. Time, gravitation and moments of inertia. Pendulum. Determination of gravity by Kater's and Bessel's method. Determination of the velocity and pitch of sound. Reed & Guthe's Manual of Physical Measurements.

(4) Physical Measurements.

Two Credits. Four Hours, One Semester.

Elementary electro-statics. Electrification by friction, conduction and induction. Magnetism. Determination of horizontal force and magnetic moment. Fundamental experiments in Voltaic electricity. The galvanoscope and the galvanometer. Determination of E. M. F. Wheatstone's bridge. Calibration of galvanoscope. Measurements of resistance. The high resistance differential astatic galvanometer. Measurement of galvanometer resistance. Thomson's method. Differential method. Use of slide meter bridge. Carey Foster's method. Measurement of very low resistances. The method of comparison of potentials, projection of equal potentials and auxiliary conductors. Measurement of high resistances. The direct deflection method. Electrolyte resistance. Electrolytic resistance by alternating currents. The tangent galvanometer. Use of the standard galvanometer and the determination of E. M. F. Application of Joule's law. Use of potential galvanometer. Determination of the magnetic elements. Electro-magnetism and electro-magnetic induction. Action of linear current on magnet. Biot and

Savart's law. Proof of electro-magnetic laws. Magnetic action of a solenoid. Laws of the electro-magnet. Induction experiments. Induction balance of Hughes. Damping. Comparison of resistance by magneto conductor. Use of earth inductor. Study of magnetic distribution. The condenser. Determination of the absolute capacity of a condenser. Electrometers. Reed & Guthe's Manual of Physical Measurements.

MATHEMATICS.

(1) Plane Trigonometry.

Three Credits. **Three Hours, One Semester.**

A course in Plane Trigonometry with many applications so as to give a thorough review of algebra and geometry. Practical problems. Wentworth's Plane & Spherical Trigonometry.

(2) Spherical Trigonometry.

Three Credits. **Three Hours, One Semester.**

A brief course intended to familiarize the student with Spherical Trigonometry and some of its applications. Wentworth's Plane and Spherical Trigonometry.

(3) College Algebra.

Three Credits. **Three Hours, One Semester.**

A course containing the usual matter and methods of Advanced Algebra, special attention being given to graphical methods. Hawkes' Advanced Algebra.

(4) Analytic Geometry.

Three Credits. **Three Hours, One Semester.**

A course covering the general principles and more practical applications of Plane Analytic Geometry. Smith & Gale, Elements of Analytic Geometry.

(5) Analytic Geometry and Calculus.

Three Credits. **Three Hours, One Semester.**

A brief course of Solid Analytic Geometry and elementary Calculus intended to acquaint the student with the methods of higher mathematics. Smith & Gale, Elements of Analytic Geometry.

(6) Differential Calculus.

A course intended for Juniors not taking either Law or Pre-Medical and covering thoroughly the theoretical parts of the subject. Murray's Calculus.

(7) Integral Calculus.

Three Credits. **Three Hours, One Semester.**

A course similar to course 6 in Integral Calculus. Murray's Calculus.

For other Courses in Mathematics cf. The College of Engineering.

CHEMISTRY.

(1) General and Inorganic Chemistry.

Three Credits. **Three Hours, One Semester.**

Discussion of Fundamental Laws, Mathematics of Chemistry. Ordinary elements studied from the standpoint of the periodic law. McPherson & Henderson College Chemistry.

(2) Laboratory.

Two Credits. **Four Hours, One Semester.**

Practical demonstration of laws and theories enunciated in Course 1. Newth's Manual of Analysis.

(3) Analysis A.

One Credit. **Four Hours, One-Half Semester.**

Dry methods of analysis; detection of metals, non-metals and acid radicals. Use of blowpipe.

(4) General and Inorganic Chemistry.

Three Credits. **Three Hours, One Semester.**

The ordinary and rarer elements from the standpoint of the periodic law. Metallurgy, with particular adaption to the needs of Engineering Students. McPherson & Henderson, College Chemistry.

(5) Laboratory.

One Credit. **Four Hours, One-Half Semester.**

Practical demonstration of principles discussed in Course 4. Manufacture of Iron, Steel, Cement, Gas, Lubricators, Distillate, Pigments, and Alloys. Newth's Manual of Chemical Analysis.

(6) Analysis B.

One Credit. **Four Hours, One-Half Semester.**

Qualitative and quantitative analysis. Gravimetric, volumetric and electrolytic methods. Preparation of normal solutions. Fire Assay methods. Newth's Manual of Chemical Analysis.

(7) Organic Chemistry.

Six Credits. **Three Hours, Two Semesters.**

Constitution, classification, decomposition and syn-

thesis of organic compounds. Homologous Series. Paraffins and derivatives. Hydroxy-acids. Carbohydrates. Kinds of Isomerism. Mixed compounds containing Nitrogen. Unsaturated compounds. Olefins, Acetylenes and principal derivatives. Aromatic compounds. Benzine and derivatives. Phenyl-Methanes and aniline dyes. Hydrocarbons containing two Benzene residues. Glucosides, Proteins and Alkaloids. Remsen's Organic Chemistry.

(8) Experimental Organic Chemistry.

Two Credits. **Four Hours, One Semester.**

Detection of carbon, hydrogen, nitrogen, chlorine, sulphur and phosphorus in organic compounds. Practical demonstration of properties, tests, combinations and decompositions of organic compounds. Preparation and study of typical organic substances. Special reference to methods of physiological Chemistry.

This course accompanies Course 7. Newth's Manual of Chemical Analysis.

(9) Experimental Chemistry II.

Two Credits. **Four Hours, One Semester.**

Gravimetric analysis. Preliminary manipulations. Typical determinations of metals and of acids. Electrolytic method of analysis. Volumetric analysis Standard and normal solutions. Indicators. Calibration of vessels. Methods based upon saturation, oxidation and reduction, precipitation. Gas analysis. Estimation of carbon, hydrogen, nitrogen, chlorine, sulphur, phosphorus, and organic compounds. Determination of molecular weights. Newth's Manual of Chemical Analysis.

ENGLISH.

(1) English Poetry.

Three Credits. Three Hours, One Semester.

Its nature and kinds especially the epic, the drama, the lyric. Metre and verse.

(2) Argumentation and Oratory.

Three Credits. Three Hours, One Semester.

Invention arrangement and development of thought; a course presenting the principles of reasoning and persuasion.

(3) Rhetoric.

Three Credits. Three Hours, One Semester.

Exposition and description. The Essay. Sources and presentation of material.

(4) Narration.

Three Credits. Three Hours, One Semester.

The Short Story. The Novel.

(5) Composition.

Two Credits.

Practice in verse composition of the simpler forms. Three themes and one longer composition are submitted weekly to the Professor for correction and criticism.

(6) Composition.

Two Credits.

Exercises in brief-making and the writing of speeches. Three themes and one longer composition

weekly. Two speeches of considerable length during the semester.

(7) Composition.

Two Credits.

Essays and exercises in exposition and description. One essay and three exercises are to be done each week.

(8) Composition.

Two Credits.

Three exercises in narration each week. Three short stories during the course.

(9) Thesis.

Five Credits.

A thesis of at least 5000 words on a subject chosen by the student with the approval of the Dean of the Faculties and the Professor. The thesis will be governed by the general regulation for theses on page 59. Its completion is a necessary pre-requisite for taking the oral examination in this department.

(10) English Literature.

Two Credits. **Two Hours, One Semester.**

From the earliest period to the Norman Conquest. Lectures and recitations.

(11) English Literature.

Two Credits. **Two Hours, One Semester.**

From the Norman Conquest to 1780. Lectures and recitations.

(12) English Literature.

Two Credits. **Two Hours, One Semester.**

From 1780 to 1830. Rise and Development of the Comedy and Drama. Lectures and recitations.

(13) English Literature.

Two Credits. **Two Hours, One Semester.**

From 1830 to the present time. Lectures and recitations. American Literature. Development of English fiction. Critical analysis and study of the characteristic features of selected authors.

(14) Public Speaking and Interpretation.

Two Credits. **One Hour, Both Semesters.**

The Voice, Enunciation, Inflection. Tone-Color. Gesture.

(15) Public Speaking.

Two Credits. **One Hour, Both Semesters.**

A continuation of Course 14.

(16) Oral Examination.

On the subject matter of courses 1, 2, 3, 4, 10, 11, 12, 13, 14, 15. The examination lasts 20 minutes and is a prerequisite for the granting of any credit in this department.

LATIN.

(1) Virgil—The Aeneid.

Four Credits. **Four Hours, One Semester.**

After reading books VII—XII, the poem will be

studied as a whole, special attention being given to the sources, to the epic technique and literary art of Virgil and to the tracing of his influence in the literature of the world.

(2) Rapid Reading 1.

One Credit. One Hour, One Semester.

A course intended to give to the student a broad knowledge of Roman life and literature and to facilitate the study of Latin sources.

(3) Latin Composition 1.

One Credit. One Hour, One Semester.

Composition in narration and description based chiefly on the text of the Aeneid and implying a discrimination of the vocabulary and syntax of prose and verse. Students will write three compositions weekly.

(4) The Latin Historians.

Four Credits. Four Hours, One Semester.

Copious readings in Sallust, Curtius, Pliny and Livy, with critical consideration of the historical works of these writers and collateral reading directed to reach an appreciation of their place in Latin literature.

(5) Rapid Reading 2.

One Credit. One Hour, One Semester.

The complete works of Tacitus will be read in this course.

(6) Latin Composition 2.

One Credit. One Hour, One Semester.

A continuation of Course 3, but based on the Latin historians.

(7) Cicero.

Three Credits. **Four Hours, One Semester.**

The orations studied as models of oratorical art; rapid reading, analysis, discussion, criticism.

(8) Horace.

Three Credits. **Three Hours, One Semester.**

The Odes, Books I—IV, will be read and carefully studied. Students will memorize selected odes and portions of odes. Such phases of Roman life as are suggested will be the subject of collateral reading under the direction of the professor.

(9) Latin Composition.

Two Credits. **Two Hours, One Semester.**

Written work on subjects assigned by the professor will be required three times a week. Students will be expected to show facility and elegance of diction in their written work.

(10) Thesis.

Five Credits.

At the beginning of the second Semester of the Sophomore year, the professor after consulting with the students shall assign to each a thesis implying copious reading in Latin. The Thesis shall be typewritten and contain at least 6000 words.

(11) Oral Examination.

The examination is upon Courses 7 and 8, lasts for 15 minutes and is a pre-requisite for obtaining any credit in this department.

GREEK.

Note: Greek is required only for those students who intend to proceed to the degree of Bachelor of Arts.

(1) Simple Greek Prose.

Four Credits. **Four Hours, One Semester.**

Selections are taken from Plato, Chrysostom, Gregory, Nazianzen and the Iliad. This course is open to those who have completed the course of Elementary Greek.

(2) Simple Greek Poetry.

Four Credits. **Four Hours, One Semester.**

Elegies of Gregory, Nazianzen, Idylls of Theocritus, selected portions of the Odyssey. In this course, Greek life and customs are studied in detail, and special attention is given to the various dialects.

(3) Simple Greek Composition.

Two Credits. **One Hour, Both Semesters.**

Systematic training in the writing of simple Greek, with copious imitations taken from authors studied in Courses 1 and 2.

(4) Greek Literature, I.

Four Credits. **Four Hours, One Semester.**

Reading of selected portions of Sophocles, Pindar, and Euripides. In this course special attention is given to the Greek epic as a whole and Greek tragedy and lyric poetry are studied in detail.

(5) Greek Literature, II.

Four Credits. **Four Hours, One Semester.**

Representative types of the Grecian orators, Chrysostom, Basil, Demosthenes, will be carefully read and studied as a whole.

(6) Rapid Reading.

One Credit. **One Hour, Both Semesters.**

Sight reading of the easier portions of the Greek historians, and written compositions in imitation.

(7) Oral Examination.

The examination is upon courses 4 and 5, lasts ten minutes, and is a pre-requisite for obtaining any credit in this department.

HISTORY.

(1) European History, 1305-1563.

Three Credits. **Three Hours, One Semester.**

Exile of the Papacy and the Great Western Schism. The Hundred Years War. The Wars of the Roses. Consolidation of the European Monarchies. The Inquisition. The Renaissance. General character of the period. The Age of Charles V. The Protestant Revolution and the Catholic Revival.

(2) European History, 1563-1714.

Three Credits. **Three Hours, One Semester.**

The Hugenot War in France. Philip II., Mary Stuart and Elizabeth. The Thirty Years War. The Puritan Revolution. The Age of Louis XIV.

(3) European History, 1714-1800.

Three Credits. **Three Hours, One Semester.**

The Hanoverian Succession. The making of Russia. Maria Teresa and Frederick II. Wars of the Suppression. The colonies in North America. The Seven Years War. The Division of Poland. Progress of the Political and Social Revolution of the Eighteenth Century. The American War of Independence. The French Revolution.

(4) European and American History, 1800.

Three Credits. **Three Hours, One Semester.**

The Era of Napoleon I. Catholic Emancipation in Great Britain. The Revolution of the Barricades and of the Cabinet. The Civil War in the United States and its causes. Our own times.

Lectures on the moral, political, economic, and social aspects of these periods of history, are given three times every week. The subjects enumerated are studied in detail.

PHILOSOPHY OF RELIGION, EVIDENCES, MORALS.

(1) The Essentials of Christian Doctrine, 1.

Two Credits. **Two Hours, One Semester.**

Various Creeds. The Apostle's Creed. Each Article of the Creed is studied in particular, attention being given to any subject bearing directly on these articles, as Sin, The Powers of the Church, Infallibility, etc. Martin's Catholic Religion.

(2) The Essentials of Christian Doctrine, 2.

Two Credits. Two Hours, One Semester.

The Law of God. What is commanded and forbidden by the Decalogue is studied in detail. The Precepts of the Church, Grace, Prayer, and each of the Seven Sacraments together with collateral subjects. Martin's Catholic Religion.

(3) Truth of the Catholic Religion.

Four Credits. Two Hours, Both Semesters.

(a) **Christianity a revealed religion.** What Religion is. What Revelation is. Kinds of revelations. What revelation necessary to know truths above human ken. Man's attitude toward Revelation. Primitive, Patriarchal, Mosaic Revelation. The Divine origin of Pre-Christian Revelation. The Christian Revelation; its origin, evidences of divinity of its origin.

(b) **The Church. The Dispenser of the Christian Religion.** Institution of the Church. End of the Church. Constitution of the Church. Marks of the Church. The teaching office of the Church. Sources of the Church's teaching. The rule of Faith. Wilmer's Handbook of the Christian Religion.

(4) Christian Dogma.

Four Credits. Two Hours, Both Semesters.

(a) **God the Author and Restorer of our Salvation.** The existence, nature, and attributes of God. The Divine Trinity. God the Creator of the universe. Various grades of creation. The spiritual and material world. Man. Relation of different orders of creation to one another. God the Redeemer of fallen man.

Decree and plan of redemption. The Redeemer, one person and two natures. The work of redemption.

(b) The Plan of Redemption as realized in Individuals. Grace, actual, habitual or sanctifying. The Sacraments as a means of Grace. The Sacraments are studied in general—their matter and form,—their efficacy and the dispositions requisite to receive them validly and with fruit. Then each Sacrament is studied in detail. The Church as a means of salvation. The four last things. Wilmer's Handbook of the Christian Religion.

(5) Christian Morals.

Four Credits. Two Hours, Both Semesters.

(a) Christian Morals in General. Law as the objective norm of human actions. Conscience as the subjective norm of human actions. The conditions of morality. Moral good and moral evil.

(b) Christian Morals in Particular. The Christian's duties toward God,—Faith, Hope, Charity. Religion. Direct and indirect acts of worship. The Church as the controller of religious worship. Duties towards ourselves and our neighbor,—general and particular.

(c) Works of supererogation or Christian perfection. Wilmer's Handbook of the Christian Religion.

MODERN LANGUAGES.

French.

(1) Elementary French, I.

Four Credits. Four Hours, One Semester.

In this course the student is carefully drilled in

elementary grammar up to the irregular verbs, attention also being given to acquiring a vocabulary of the more common words.

(2) Elementary French, II.

Four Credits. **Four Hours, One Semester.**

A continuation of the preceding course. Special attention is given to the more important irregular verbs, the memorizing of words, and translation of French into English and vice versa.

(3) Intermediate French, I.

Four Credits. **Four Hours, One Semester.**

A thorough review of grammar and syntax. The object of this course is to acquaint the student with the scientific vocabulary and enable him to read the more simple scientific French.

(4) Intermediate French, II.

Four Credits. **Four Hours, One Semester.**

This course continues the work begun in Course 3. Regular exercises are given in written work and copious reading is made from the standard scientific works in order to fit the student for professional reading.

(5) Advanced French, I.

Four Credits. **Four Hours, One Semester.**

A thorough review is made of Courses 1 and 2, by means of conversational exercises, sight reading and written exercises. Selections are read from the more noted French writers.

(6) Advanced French, II.

Four Credits. **Four Hours, One Semester.**

A continuation of Course 5, with conversational exercises and copious readings from the French authors.

German.

(1) Elementary German, I.

Four Credits. **Four Hours, One Semester.**

Elements of German Grammar. Drill in pronunciation. Vocabulary.

(2) Elementary German, II.

Four Credits. **Four Hours, One Semester.**

A continuation of Course 1. Syntax, Oral and written exercises. Reading from the more simple German prose.

(3) Intermediate German, I.

Four Credits. **Four Hours, One Semester.**

Review of syntax. Translation. Oral and written exercises. Reading from the German scientific works to acquire a technical vocabulary.

(4) Intermediate German, II.

Four Credits. **Four Hours, One Semester.**

Reading and written and oral exercises in technical German. This course aims at preparing the student to undertake the reading of the more difficult scientific works.

(5) Advanced German, I.

Four Credits. **Four Hours, One Semester.**

A study of the German prose authors with copious selected reading.

(6) Advanced German, II.

Four Credits. Four Hours, One Semester.

A more extensive course in German literature, especially in German poetry.

Spanish.

(1) Elementary Spanish, I.

Four Credits. Four Hours, One Semester.

Elements of Spanish grammar. Drill in pronunciation, Vocabulary.

(2) Elementary Spanish, II.

Four Credits. Four Hours, One Semester.

A continuation of Course 1. Syntax, oral and written exercises. Reading from the simpler Spanish prose.

(3) Intermediate Spanish, I.

Four Credits. Four Hours, One Semester.

Review of grammar and syntax. Translation. Oral and written exercises. Reading from somewhat difficult Spanish prose.

(4) Intermediate Spanish, II.

Four Credits. Four Hours, One Semester.

Reading, written and oral exercises.

(5) Advanced Spanish, I.

Four Credits. Four Hours, One Semester.

A study of Spanish prose authors with copious reading.

(6) Advanced Spanish, II.

Four Credits. Four Hours, One Semester.

Spanish Poetry.

College of Engineering

College of Engineering

The foundation of the College of Engineering in the University of Santa Clara was the result of repeated and urgent requests that opportunities should be given young men, ambitious to follow the Engineering profession, to pursue and complete the studies leading thereto in an environment and atmosphere conducive as well to deep persevering study as to cultural and moral development.

To meet this demand, the Faculty of the University has added sound and thorough courses in Architectural, Civil, Electrical and Mechanical Engineering. Each of these departments is in the hands of experienced and practical engineers who devote their whole time and attention to the success of their work. As is traditional at Santa Clara, students in Engineering are given individual care, assistance, advice and encouragement. The work exacted is of the highest type; nevertheless, owing to this individual care and to the judicious admission of students as well as the prompt elimination from the various departments of students found to be inadequately prepared in fundamental studies or in seriousness of purpose, there is very little likelihood and no excuse for failure on the part of the student.

The demand for engineers is today greater than ever before. Owing to the vast extent of our State and of the neighboring States, as well as of Alaska on the North and the great Mexican and Central American

Republics on the South, with which California is so intimately connected, and owing moreover to the fact that these countries are as yet comparatively undeveloped and that California, on account of her unexcelled climate and almost unlimited natural sources of power, is bound to take her place among the foremost manufacturing states of the Union, it is evident that this demand for first class engineers will go on increasing for many decades to come. Logically it is California that should supply a very great proportion of this demand. The young men of our State have, therefore, a most powerful incentive to enter the engineering profession in its various branches, in which, granted a broad and thorough preparation, they are assured of success.

That this preparation can be given by mere trade schools is no longer contended. The engineer today must be more than a machinist, electrician or surveyor. He can no longer be a self-made man in the old sense. His mind must possess the acumen and culture which only a broad college training and college association can give, and his acquaintance with and love of mathematics and science should be the foundation on which his knowledge of their technical applications is based.

This is the ideal which Santa Clara cherishes for the engineers who shall receive their education from her.

COURSES.

Four year Courses are offered leading to the degrees of Bachelor of Science in Architectural Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Electrical Engineering and Bachelor of Science in Mechanical Engineering. These courses aim,

first, to give the student a thorough knowledge of the sciences on which all Engineering is based, second, to develop his ability to acquire accurate information, third, to develop his judgment by practical work so that he may be able to use his knowledge and information to the best advantage.

ARCHITECTURAL ENGINEERING.

The Course in Architectural Engineering gives facility in the application of the fundamental principles of beauty and strength to buildings. Architectural forms and principles and their application in Architectural designs are taken up, together with the strength of materials and the design of trusses, columns and reinforced concrete, the whole enabling the student to produce correct, beautiful and economical works of Architecture.

CIVIL ENGINEERING.

Civil Engineering covers the field of structural work (steel, concrete and stone buildings and bridges), municipal engineering (roads, pavements and sewers), water power development, irrigation and railroad construction. These are all based on the fundamental sciences of Mathematics, Physics and Chemistry, and as much practice as possible is given to facilitate the application of these sciences to professional work.

ELECTRICAL ENGINEERING.

Electrical Engineering has to do with the design and construction of electrical machinery and the various

applications of electricity to the arts. Electrical and Mechanical Engineering are so closely interrelated that the courses of the first three years are the same, and it is only the Senior courses, such as Telephony and pure Electrical design, that are differentiated from the Mechanical Engineering courses.

MECHANICAL ENGINEERING.

Mechanical Engineering may be divided into three closely related lines, Design, Manufacturing and Power Generation. The courses in Design begin with mechanical drawing and continue with a study of mechanisms. strength of materials, stresses in, adaptability, cost. and commercial worth of machines. Manufacturing has to do with the organization of commercial enterprise, systems of works management, efficiency systems, cost of materials and power and layout of machinery in a factory for maximum output. The subject of Power Generation is covered by courses on steam and gas engines, turbines, boilers, water motors and electric generators, together with the proper operation of all classes of machinery and the application of power thereto.

ENTRANCE REQUIREMENTS.

Applicants for admission to the Freshman Year of the College of Engineering must either (1) have completed the regular Four-Year High School course of the Preparatory School of the University, or (2) have completed a similar course in an accredited High School, or (3) pass an examination based on a four-year course amounting in the aggregate to sixteen

units. Of these sixteen units, ten or more are prescribed and required of all applicants; the rest are elective from the list of optional subjects.

SUBJECTS PRESCRIBED.

English	2 units
History	2 units
Modern Languages	2 units
Algebra	1½ units
Geometry	1½ units
Physics	1 unit

ELECTIVES.

Chemistry	1 unit
Modern Languages	2 units
English	1 unit
History	2 units
Trigonometry	½ unit

To count a "unit" a subject must be taught five times a week, in periods of not less than forty-five minutes, for a school year of not less than thirty-six weeks.

CONDITIONS.

In certain cases, at the discretion of the Committee on Entrance Standing, which shall decide on the merits of each particular case, conditions in elective branches to the amount of not more than two units may be allowed. All conditions must, however, be removed by the end of the Freshman year.

Every applicant should forward his application to the President, enclosing a certificate of the studies

he has completed with a testimonial as to his character and diligence, signed by the Principal of the school last attended.

The articles which each student who comes to reside at the University should bring with him are, more or less: two pairs of sheets, three pillow cases, two counterpanes, a sufficient number of shirts, drawers, handkerchiefs, socks, shoes, napkins, towels, combs, brushes, etc., all, without exception, marked distinctly and imperishably with his name.

Promptness in reaching the University on the day fixed for the opening of classes is necessary. It is essential that Parents and Students understand this clearly from the beginning of their connection with the University, as promptness in returning from vacations and recesses, which is requisite in order to prevent the loss of valuable time and the forming of habits of procrastination and negligence of duty, is strictly insisted on.

REQUIREMENTS FOR GRADUATION.

CREDITS.

In all of the groups of the College of Engineering, 176 credits are required for graduation. A credit is given for each one-hour recitation, or lecture (requiring one hour preparation) per week, carried satisfactorily for one semester, or for two hours per week, spent in a laboratory, drawing room or shop, for one semester.

REQUIRED SUBJECTS.

The subjects required for graduation are given under appropriate headings on the following pages.

GRADES.

Semester grades are expressed on a basis of 100 for perfect work.

70 is required for passing.

60-70 indicates a condition.

Below 60 indicates a failure.

A student making 70 or more in any course is given the credits for that course. If he makes from 60 to 70 he must pass a satisfactory examination at the time set for condition examinations or receive a failure in the subject.

If the condition is received in a laboratory course, the student must make up the work in which he is deficient before the time of the condition examinations, or receive a failure.

A failure in a subject means that the student must repeat the subject in class the next time it is given.

Students, who, on account of ill-health or other cause, are not able to carry 22 credits a semester, will be allowed to carry a lighter course, which will enable them to graduate in five years.

REQUIRED COURSES.

FRESHMAN YEAR OF ALL FOUR YEAR COURSES.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
College Algebra, Eng. Math. (1)	3		3
Trigonometry, Eng. Math. (2)	2		2
Chemistry, Chem. (1)	3	4	5
Mechanical Drawing, M. E. (1)		6	3
French, German or Spanish, M. Lang. (1), (3) or (5)	4		4
English, Eng. (1)	4		4
Review of Engineering Industries, M. E. (9)	1		1

Second Semester.

Analytic Geometry, Eng. Math. (3)	5		5
Chemistry, Chem. (2)	3	4	5
Descriptive Geometry, M. E. (2)	1	5	3
English, Eng. (2)	4		4
French, German or Spanish, M. Lang. (2), (4) or (6)	4		4
Review of Engineering Industries. M. E. (9a)	1		1

ARCHITECTURAL ENGINEERING.

SOPHOMORE YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Calculus, Eng. Math. (4)	4		4
Technical Mechanics, C. E. (7)	4		4
Physics, Physics (1)	3	4	5

	Hours Attendance Rec.	Lab.	Credits.
English, Eng. (3)	3		3
Construction, Arch. (10)	2		2
Descriptive Geometry, Arch. (1)		4	2
Design, Arch. (2)		4	2

Second Semester.

Calculus, Eng. Math. (5)	4		4
Technical Mechanics, C. E. (8)	4		4
Physics, Phy. (2)	3	4	5
English, Eng. (4)	3		3
Construction, Arch. (11)	2		2
Design, Arch. (3)		4	2
Free Hand Drawing, Arch. (7)		4	2

JUNIOR YEAR.

First Semester.

Mechanics of Materials, C. E. (9) and (11)	3	4	5
Masonry, C. E. (20)	5		5
Graphic Statics, C. E. (18)	2	2	3
Structural Design, C. E. (14)		2	1
Architectural Design, Arch. (4)		8	4
Philosophy, Phil. (1)	4		4

Second Semester.

Graphic Statics, C. E. (19)	2	2	3
Structural Design, C. E. (15)		4	2
Pictorial Drawing, Arch. (24)	1	4	3
Architectural Design, Arch. (5)		8	4
Philosophy, Phil. (2)	5		5
Elective			3
Fireproofing, Arch. (13)	2		2

SENIOR YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Trusses, C. E. (22)	4		4
Concrete, C. E. (27)	2	2	3
History of Architecture, Arch. (8)	2		2
Heating and Ventilation, M. E. (25)	2		2
Sanitation, Arch. (12)	2		2
Interior Decoration, Arch. (14)	2		2
Design, Arch. (6)		8	4
Philosophy, Phil. (3)	3		3

Second Semester.

History of Architecture, Arch. (9)	2		2
Political Economy, Pol. Econ. (1)	1		1
Business Law, Law (1)	1		1
Contracts and Specifications, C. E. (31)	2		2
Thesis, Arch. Thesis			6
Philosophy, Phil. (4)	4		4
Elective			6

CIVIL ENGINEERING.

SOPHOMORE YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Calculus, Eng. Math. (4)	4		4
Technical Mechanics, C. E. (7)	4		4
Physics, Physics (1)	3	4	5
Geology, Geol. (1)	2		2
Surveying, C. E. (1)	1	2	2

	Hours Attendance Rec.	Lab.	Credits.
Drawing, C. E. (12)		4	2
English, Eng. (3)	3		3

Second Semester.

Calculus, Eng. Math. (5)	4		4
Technical Mechanics, C. E. (8)	4		4
Physics, Phy. (2)	3	4	5
Mineralogy, Geol. (2)	3		3
Surveying, C. E. (2)	1	2	2
English, Eng. (3)	3		3
Drawing, C. E. (13)		2	1

JUNIOR YEAR.

First Semester.

Mechanics of Materials, C. E. (9)	3		3
Masonry, C. E. (20)	5		5
Graphics, C. E. (18)	2	2	3
Differential Equations, Eng. Math. (6)	2		2
Field Engineering, C. E. (3)	1	4	3
Structural Design, C. E. (14)		2	1
Materials Testing Laboratory C. E. (10)		2	1
Philosophy, Phil. (1)	4		4

Second Semester.

Hydraulics, C. E. (21)	3	2	4
Electricity, E. E. (14)	2	2	3
Graphics, C. E. (19)	2	2	3
Method of Least Squares, Eng. Math. (7)	2		2
Field Engineering, C. E. (4)	1	4	3
Structural Design, C. E. (15)		4	2
Philosophy, Phil. (2)	5		5

SENIOR YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Roofs, Bridges and Other Trusses, C. E. (22)	4		4
Roads and Pavements, C. E. (24)	2		2
Sewers and Sanitation, C. E. (25)	2		2
Geodesy and Astronomy, C. E. (26)		2	1
Concrete and Reinforced Concerte, C. E. (27)	2	2	3
Engineering in Field, C. E. (5)		6	3
Design, C. E. (16)		4	2
Tunneling, C. E. (28)	2		2
Philosophy, Phil. (3)	3		3

Second Semester.

Roofs, Bridges and Other Trusses, C. E. (23)	4		4
Political Economy, Pol. Econ. (1)	1		1
Business Law, Law (1)	1		1
Irrigation, C. E. (29)	2		2
Railway Construction, C. E. (30)	3		3
Estimates and Specifications, C. E. (31)	2		2
Engineering in Field, C. E. (6)		4	2
Thesis, C. E. (17)			3
Philosophy, Phil. (4)	4		4

Note. A month of practical field-work under actual conditions at the University farm at Loyola, in the foot-hills of Santa Clara County, is required during the vacation at the close of the Junior and of the Senior year.

The credits of the Junior and Senior years are not complete without these courses, unless the student has had the equivalent in actual practice in civil engineering.

ELECTRICAL AND MECHANICAL ENGINEERING.

SOPHOMORE YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Calculus, Eng. Math. (4)	4		4
Technical Mechanics, C. E. (7)	4		4
Physics, Physics (1)	3	4	5
Kinematics, M. E. (3)	2		2
English, Eng. (3)	3		3
M. E. Laboratory, M. E. (15)		4	2
Shopwork, M. E. (10)		4	2

Second Semester.

Calculus, Eng. Math. (5)	4		4
Technical Mechanics, C. E. (8)	4		4
Physics, Physics (2)	3	4	5
Drawing, M. E. (4)	1	4	3
English, Eng. (4)	3		3
Shopwork, M. E. (11)		6	3

JUNIOR YEAR.

First Semester.

Mechanics of Materials, C. E. (9)	3		3
Machine Design, M. E. (5)		4	2
Boilers, M. E. (18)	2		2

	Hours Attendance Rec.	Lab.	Credits.
Electrical Measurements, Physics (3)	2		2
Electric Machinery, E. E. (1)	3		3
Differential Equations, Eng. Math. (6)	2		2
E. E. Laboratory, E. E. (9)		2	1
Materials Testing Laboratory, C. E. (11)		2	1
Shopwork, M. E. (12)		4	2
Philosophy, Phil. (1)	4		4

Second Semester.

Hydraulics, C. E. (21)	3	2	4
A. C. Machinery, E. E. (2)	3		3
Steam and Gas Machinery, M. E. (19)	3		3
E. E. Laboratory, E. E. (10)		2	1
Machine Design, M. E. (6)	1	4	2
M. E. Laboratory, M. E. (16)		2	1
Shopwork, M. E. (13)		4	2
Surveying, C. E. (32)		2	1
Philosophy, Phil. (2)	4		4

ELECTRICAL ENGINEERING.

SENIOR YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Thermodynamics, M. E. (20)	4		4
Internal Combustion Engines and Automobiles, M. E. (21)	2		2
Industrial Engineering, M. E. (23)	2		2
Electrical Design, E. E. (6)		4	2

	Hours Attendance Rec.	Lab.	Credits.
Alternating Currents, E. E. (3)	3		3
Telephony, E. E. (5)	1		1
E. E. Laboratory, E. E. (11)		4	2
Graphics, C. E. (18)	2	2	3
Philosophy, Phil. (3)	4		4

Second Semester.

Power Plant Design, E. E. (7)	1	2	2
Alternating Currents, E. E. (4)	3		3
Electrical Design, E. E. (8)		4	2
E. E. Laboratory, E. E. (12)		4	2
Hydraulic Motors, M. E. (22)	2		2
Business Law, Law (1)	1		1
Contracts and Specifications, C. E. (31)	2		2
Political Economy, Pol. Econ. (1)	1		1
Technical Literature, E. E. (13)	1		1
Thesis, E. E. Thesis			4
Philosophy, Phil. (4)	4		4

MECHANICAL ENGINEERING.

SENIOR YEAR.

First Semester.

	Hours Attendance Rec.	Lab.	Credits.
Thermodynamics, M. E. (20)	4		4
Internal Combustion Engines and Automobiles, M. E. (21)	2		2
Industrial Engineering, M. E. (23)	2		2
Alternating Currents, E. E. (3)	3		3
Machine Design, M. E. (7)		4	2

	Hours Attendance Rec.	Lab.	Credits.
Graphics, C. E. (18)	2	2	3
M. E. Laboratory, M. E. (17)		4	2
Shopwork, M. E. (14)		4	2
Philosophy, Phil. (3)	4		4

Second Semester.

Technical Literature, M. E. (27)	1		1
Power Plant Design, M. E. (8)	1	2	2
Alternating Currents, E. E. (4)	3		3
Hydraulic Motors, M. E. (22)	2		2
Contracts and Specifications, C. E. (31)	2		2
Political Economy, Pol. Econ. (1)	1		1
Thesis, M. E. Thesis			4
Business Law, Law (1)	1		1
Elective			2
Philosophy, Phil. (4)	4		4

OUTLINE OF COURSES.

ARCHITECTURE.

(1) Descriptive Geometry.

Two Credits. Four Hours Drawing.
First Semester.

Problems in point, line, plane, curved surfaces and double curved surfaces of revolution. Intersection of planes and solids. Development of solids. Plane surface solids. Intersection of solids. Perspective. Shades and shadows. Isometric projections. Applications. Prerequisite, M. E. (2).

(2) Design.

Two Credits. **Two Hours Drawing.**
First Semester.

The student is taught to draw with neatness and precision the various Orders. Free scope is given him to bring into play his designing ability. This course is a preparation for general architectural composition and aims to bring out and direct along proper channels whatever ability in designing the student may have. At first simple problems are given but as the student's ability increases he is given more difficult problems.

(3) Design.

Two Credits. **Four Hours Drawing.**
Second Semester.

Continuation of (2). Prerequisite, Arch. (2).

(4) Design.

Four Credits. **Eight Hours Drawing.**
First Semester.

Continuation of (3). Prerequisite, Arch. (3).

(5) Design.

Four Credits. **Eight Hours Drawing.**
Second Semester.

Continuation of (4). Prerequisite, Arch. (4).

(6) Design.

Four Credits. **Eight Hours Drawing.**
First Semester.

Continuation of (5). Prerequisite, Arch. (5).

(7) Freehand Drawing.

Two Credits. **Four Hours Drawing.**
Second Semester.

Drawings are made from casts and afterwards from life. In all drawings precision and neatness in freehand work is demanded.

(8) History of Architecture.

Two Credits. **Two Hours.**
First Semester.

Fully illustrated lectures and recitations are given on the Architectural history of different periods. The outlines of general history are studied in conjunction with the architecture of the times in order to enable the student to appreciate the relation of the people and their architecture. A careful study is made of the various examples of the great architectural styles of these times and also of painting and sculpture.

(9) History of Architecture.

Two Credits. **Two Hours.**
Second Semester.

Continuation of (8). Prerequisite, Arch. (8).

(10) Construction.

Two Credits. **Two Hours.**
First Semester.

A course intended to give the student the fundamental notions. Foundations are studied and their adaptability to various soils. Manufacture of lime and cement; bricks and their manufacture; stone quarrying and dressing.

(11) Construction.

Two Credits — Two Hours. Second Semester.

After the course in general construction, constructions in frame of wood, stone and brick are carefully studied.

(12) Sanitation.

Two Credits. — Two Hours. First Semester.

The draining and sewage of buildings, traps and systems of trapping, plumbing, fixtures, sewage removal and disposal, improved methods of house drainage and sanitary plumbing. Tests.

(13) Fireproofing.

Two Credits. — Two Hours. Second Semester.

A study of the different varieties of fire-proofing material and the methods of fire-proof building.

(14) Interior Decoration.

Two Credits. — Two Hours. First Semester.

Students are taught the designing of fire-places, stairways, halls, ceilings, wainscoting and the like, and also such ornamental designs for interior or exterior work as will bring into practice what he has learned of the various styles of architecture and their combinations. Plans are made of these in various scales.

CHEMISTRY.

(1) General and Inorganic Chemistry.

Three Hours Lecture, Four Hours Laboratory.
Five Credits. First Semester.

Discussion of Fundamental Laws, Mathematics of Chemistry. Ordinary elements studied from the standpoint of the Periodic Law. Practical demonstration of Laws and Theories. McPherson & Henderson College Chemistry.

(2) General and Inorganic Chemistry.

Three Hours Lecture, Four Hours Laboratory.
Five Credits. Second Semester.

Ordinary and rarer elements from the standpoint of the Periodic Law. Metallurgy, with particular adaptation to the needs of Engineering students. Practical demonstration of principles discussed. Manufacture of Iron, Steel, Cement, Gas, Lubricants, Distillates, Pigments and Alloys. Prerequisite Chem. (1). McPherson & Henderson's College Inorganic Chemistry.

CIVIL ENGINEERING.

(1) Surveying.

One Hour Lecture, Two Hours Laboratory.
Two Credits. First Semester.

Theory, construction, use and adjustments of tape, compass, level and transit. Land and city surveying. Plotting, field work and computation of areas. Division of land. Simple leveling. Complete maps. Practical field work covering all matter taught in class

work. The object is to thoroughly familiarize the student with the instruments and with field conditions. Field notes. Field maps. Topographical sketching without instruments. Prerequisite Eng. Math. (2). Johnson-Smith's Theory and Practice of Surveying.

(2) Surveying.

One Hour Lecture, Two Hours Laboratory.
Two Credits. Second Semester.

Continuation of (1). Prerequisite C. E. (1). Johnson-Smith's Theory and Practice of Surveying.

(3) Field Engineering.

One Hour Lecture, Four Hours Laboratory.
Three Credits. First Semester.

Leveling, contour lines, hachures, cross-section work. Use of plane table. Maps of work. Stadia. Transit stadia. City, mine, hydrographic and topographic surveying. Engineering office work. Plotting profiles and cross-sections. Calculations of areas. Computation of volumes of earth work and masonry. Draughting field notes. Excavation methods in different materials. Estimate of cost. Overhaul. Application to canals, trenches, embankments, dredging, etc. Practical surveying in the field under all the heads in the scope of the work in class. Notes. Calculations. Conditions made as nearly those of a corps in the field as possible, each student being required to fill every position in turn. Johnson-Smith's Theory and Practice of Surveying.

(4) Field Engineering.

Three Credits. One Hour Lecture, Four Hours Laboratory. Second Semester.

Continuation of (3). Prerequisite C. E. (3). Johnson-Smith's Theory and Practice of Surveying.

(5) Engineering in Field.

Three Credits. Six Hours Laboratory. First Semester.

Reconnaissance. Location, preliminary survey and grade stakes for highways, canals and railways. Plots and calculations from notes. Theory of railway curves; simple, compound and taper curves. Locating sidetracks, switches, yards. Cross-sectioning. Triangulation. The work is made as nearly practical as possible and covers the theories and principles taught in class work. Prerequisite C. E. (4). Johnson-Smith's Theory and Practice of Surveying. Pickels and Wiley's Railway Surveying, Allen's Railroad Curves and Earthwork.

(6) Engineering in Field.

Two Credits. Four Hours Laboratory. Second Semester.

Continuation of (5). Prerequisite C. E. (5). Text as in (5).

(7) Technical Mechanics.

Four Credits. Four Hours. First Semester.

General theories and principles concerning matter, inertia, space and time, motion, velocity and acceleration. Momentum. Force. Measures. Comparison

and representation of force. Statics: Composition and resolution of concurring forces. Conditions of equilibrium. Composition and resolution of forces acting on a rigid body. Center of gravity. Friction. Virtual velocities. Machines. Funicular polygon. Attractions. Rectilinear and curvilinear motion. Kinetics: laws of motion. Motion under the action of a variable force, and in a resisting medium. Central forces. Constrained motion. Impact. Work and energy. Moments of inertia. Rotary motion. Motion of a system of rigid bodies in space.

Effort is made throughout the course to direct the attention of the student to practical application of mathematical deductions. Prerequisites Eng. Math. (3) and must be taking Physics (1). Hancock's Technical Mechanics.

(8) Technical Mechanics.

Four Credits. **Four Hours.**
Second Semester.

Continuation of (7). Prerequisite C. E. (7). Text as in (7).

(9) Mechanics of Materials.

Three Credits. **Three Hours.**
First Semester.

Resistance and elasticity of materials. Pipes, cylinders and riveted joints. Simple and cantilever beams. Restrained and continuous beams. Columns, shafts and girders and designing same. Torsion in shafts. Combined stresses. Strength and resilience of materials. Tension and compression. Flexure of beams.

Shear and torsion. Apparent and true stresses. Plates, spheres and columns. Analytical and graphical methods used in the solution of problems. Prerequisites Eng. Math. (5) and C. E. (8). Merriman's Mechanics of Materials.

(10) Materials Testing Laboratory.

One Credit. **Two Hours Laboratory. First Semester.**

Tests of iron, steel, wood and concrete in tension, compression, shear, bending and torsion. Rattler tests on brick, and standard tests on road materials.

Prerequisite—must be taking C. E. (9). Text as in (9).

(11) Materials Testing Laboratory.

Two Credits. **Four Hours Laboratory. First Semester.**

Same as C. E. (10) only more complete. Especially for students in Architectural Engineering, Electrical Engineering and Mechanical Engineering. Prerequisite—must be taking C. E. (9). Text as in (9).

(12) Drawing.

Two Credits. **Four Hours Drawing. First Semester.**

Shading by lines and colors. Topographical drawing and lettering. Conventional signs, etc. Maps of work done in field. Completed maps in pencil, pen and colors. Blue prints. Tracing structural details. Prerequisite M. E. (1). Daniel's Topographical Drawing.

(13) Drawing.

Two Credits. **Four Hours Drawing.**
Second Semester.

Continuation of (12). Prerequisite C. E. (12). Text as in (12).

(14) Structural Design.

One Credit. **Two Hours Drawing.**
First Semester.

Mechanical drawing. Design and working drawings of machinery. Design and drawing of dams in earth, stone, wood, concrete and reinforced concrete. Piers, retaining walls and abutments in different materials. Design and drawings of concrete and reinforced concrete arches, culverts and bridges. Trestles and viaducts. Simple bridges. Problems under certain conditions are given students from which the design is to be evolved. Drawings giving in detail the structure of the design are required.

Prerequisite—must be taking C. E. (10). Baker's A Treatise on Masonry Construction.

(15) Structural Design.

Two Credits. **Four Hours Drawing.**
Second Semester.

Continuation of (14). Prerequisite C. E. (14). Baker, and Current Publications of New Structures.

(16) Design.

Two Credits. **Four Hours Drawing.**
First Semester.

Analysis, design, estimate and drawings for a concrete or reinforced concrete dam, retaining wall, cul-

vert or abutment. Same for a reinforced concrete bridge, either of solid arch, rib arch, girder or slab construction. Analysis, design and drawings for a trussed bent or tower in wood or steel. Analysis, design and drawings for a steel truss highway or railway bridge. In connection with this course, the student will be kept in touch with the latest methods and details of construction. Buel and Hills' Reinforced Concrete; Baker's Treatise on Masonry Construction; Taylor and Thompsons', Concrete Plain and Reinforced; Merriman's Roofs, Bridges and Other Structures; Current Publications.

Prerequisite C. E. (5).

(17) Thesis.

Three Credits. **Six Hours.**
Second Semester.

Original investigation of some Engineering problem.

(18) Graphics.

Three Credits. **Two Hours Lecture, Two Hours Laboratory.**
First Semester.

Principles and methods. Application to roof trusses under dead, snow and wind loads. Complete stresses for triangular and crescent trusses. Unsymmetrical loads and trusses. Bridge trusses. Stresses due to dead, snow, wind, initial tension and live loads. Bowstring trusses. Stress loads. Locomotive wheel loads. Plate girders. Shears. Moments. Trusses with broken chords. Miscellaneous trusses. Elastic deformation of trusses. Application to other engineering structures. Merriman and Jacoby's Graphic Statics.

(19) Graphics.

Three Credits. **Two Hours Lecture, Two Hours Laboratory.**
Second Semester.

Continuation of (18). Prerequisite C. E. (18). Text as in (18).

(20) Masonry.

Five Credits. **Five Hours.**
First Semester.

Study of materials, stone, brick, terra-cotta, limes, cements, sand, gravel and broken stone. Tests for each, especial attention being paid to limes and cements. Proportions and use of lime and cement mortars. Plain concrete; materials, proportions, forms for, making and placing, water-proofing, strength, weight and cost. Reinforced: beams, columns and slabs; reinforcement of each. Details of construction, including forms, placing reinforcement and concrete, removal of forms, expansion and contraction. Separately moulded members. Concrete building blocks and artificial stone. Stone cutting. Stone masonry. Classification of stone masonry. General rules for laying. Concrete rubble. Cyclopean concrete. Strength. Brick masonry. Strength. Construction. Waterproofing. Ordinary foundations. Bed of foundation. Designing footings. Preparing bed under different conditions. Pile foundations. Wood, concrete, reinforced concrete and steel piles. Pile driving. Bearing power. Arrangement of foundation. Foundation under water. Coffer-dam, crib, and open-caisson process. Dredging through wells. Pneumatic process as used in buildings, rivers and subways. Freezing process. Masonry dams. Sta-

bility of gravity dams. Outlines of the design. Concrete and reinforced concrete dams. Liquid pressures. Causes of failure. Construction details of retaining walls. Theory of stability. Bridge abutments and piers. Culverts. Voussoir Arch. Stability of arches. Theory of arches and methods of failure. Elastic arch. Plain concrete fixed-end arches. Reinforced concrete hingeless arch. Hinged arch. Laboratory work in tests. Lectures giving further data, especially in reference to reinforced concrete and steel-concrete construction and reservoir dams. Baker's Treatise on Masonry Construction.

(21) Hydraulics.

Three Hours Lecture, Two Hours Laboratory.
Four Credits. Second Semester.

Fundamental data. Hydrostatics. Theoretical hydraulics. Instruments and observations, especially meters and pressure gauges. Flow through orifices. Flow over weirs. Flow through tubes and pipes. Flow in conduits. Flow in rivers. Water supply and water power. Dynamic pressure of water. Water wheels. Overshot, breast, undershot, vertical impulse, horizontal impulse and downward flow impulse wheels. Special forms of wheels. Turbines. Classification. Theory and design of turbines. Downward-flow and impulse turbines. Special devices. Naval hydro-mechanics. Pumps and pumping. Force and centrifugal pumps. Pumping engines. Other kinds of pumps. Pumping through pipes, and through hose. Hydraulic motors. Hydraulic-electro analogies. Stress is laid upon the effect of hydraulic laws upon engineering construction

in or under water, especially in problems involving the impounding of water, or oil. Merriman's Treatise on Hydraulics.

(22) Roof, Bridge and General Trusses.

Four Credits. **Four Hours. First Semester.**

Analysis and deduction of stresses in members of roof trusses under different loads. Different types of loads. Final stresses in bridge trusses. Types of highway and railway bridges under dead loads. Live American bridge trusses. Bridge bracing, members and floors. Deflection and least work. Cantilever trusses and cranes. Swing bridges. Hinged trusses. Viaducts. Principles of economic design. Details and design of pin truss bridge. Highway bridges. Railroad riveted bridges. Merriman and Jacoby's Roofs and Bridges.

(23) Roof, Bridge and General Trusses.

Five Credits. **Five Hours. Second Semester.**

Continuation of (22). Prerequisite C. E. (22). Text as in (22).

(24) Roads and Pavements.

Two Credits. **Two Hours. First Semester.**

Different types of highways. Economic location of highways. Traction resistance. Gradients. Foundations. Preparing foundations. Drainage. Standard cross-sections. Natural, broken stone and other artificial roads. Materials and their adaptability to classes

of traffic. Road coverings. Asphalts. Asphaltines and patented road coverings. Oils. Oiled roads. Dust prevention. Maintenance and repairs. Pavements. Paving materials. City streets. Width and cross-section, crown, gutters, curbs, footwalks and crossings. Street intersection and grades. Standard city streets and street railway construction. Repairs. Lectures on improvement and changes in highway construction. Baker's Roads and Pavements; Bulletins from Office of Public Roads, U. S. Dept. of Agriculture.

(25) Sewers and Sanitation.

Two Credits. **Two Hours. First Semester.**

Principles of design. Types. Systems and general use. Standard sewer construction in different forms and materials. Standard and power systems. Sanitary problems involved. Methods of disposition of sewage. Garbage removal and disposition. Cost estimates. Design. Lectures on problems involved. Ogden's Sewer Design, Fuller's Sewage Disposal, Elsner-Spilner-Allen's Sewage-Sludge.

(26) Geodesy and Astronomy.

One Credit. **Two Hours Laboratory. First Semester.**

Class, field and observatory work. Methods of field work to obtain accurate results. Construction, use and correction of errors in instruments. Observatory determination of latitude, longitude, azimuth and time. Field work in determining parallels and meridians. Latitude and azimuth. Transit, altazimuth and

sextant and their uses. Solar transit. Triangulations and adjustments. Compass variations. Especial attention directed to use and correction of engineering instruments and their adaptability to astronomical uses. Crandall's Text-Book on Geodesy and Least Squares.

(27) Concrete and Reinforced Concrete.

Two Hours Lecture, Two Hours Laboratory.
Three Credits. **First Semester.**

Lecture course supplemented by practical problems. Economic use of properties of concrete, reinforced concrete and steel concrete. Beams and theories of flexure. Columns. Retaining walls, drains, tanks, conduits and chimneys. Tests and designs of arches. Materials and method of construction in foundations, buildings, bridges and conduit work. Facing and finishing. Forms. Falsework. Reinforcement; apportioning in girders, beams, columns and slabs. Systems of reinforcement. Placing reinforcement. Waterproofing. The object is to make the student familiar with the details of this modern construction. Buell & Hill's Reinforced Concrete, Baker's Treatise on Masonry Construction, Taylor & Thompson's Concrete, Plain and Reinforced.

(28) Tunneling.

Two Credits. **Two Hours.**
First Semester.

Classification of tunnels. Locating tunnels. Economic location. Different methods employed in tunnels under various soil conditions. Excavating. Removal of excavations. Blasting. Powders. Drills and

machinery used. Economic distribution of forces. Heading and bench. Linings in wood, brick, concrete and reinforced concrete. Drainage. Ventilation. Rapid transit system. City subway work and methods. Stauffer: Modern Tunnel Practice.

(29) Irrigation.

Two Credits. **Two Hours.**
Second Semester.

Irrigation in general. Value, cost and returns. Drainage areas. Estimation of rainfall and discharge from drainage areas. Water units and duty. Streams, flow and discharge. Measuring devices. Canals and ditches; construction, alignment, slope and cross-section. Distribution. Application of water in irrigation. Storage work. Water supply and losses. Geological conditions affecting reservoir sites. Earth and masonry dams. Details of headworks, diversion, weirs, waste ways, sluices and regulators. Pumping machinery. Maintenance. Water rights. Irrigation laws. Newell and Murphy's Principles of Irrigation Engineering.

(30) Railway Construction.

Three Credits. **Three Hours.**
Second Semester.

Much of the course is also adapted to the construction of canals, highways, levees, etc. Reconnaissance. Location. Alignment, grade and distances. Parties. Staking out work. Grading. Organization of grading parties. Methods of grading. Machines, etc. Output of men, animals and machines. Volumes. Cut and fill. Overhaul. Finishing. Revetments. Drainage

areas and waterways. Culverts, size and character. Tracklaying. Tracklaying machines. Surfacing. Ballast. Single and double track roads. Side tracks, switches, crossings and yards. Round houses. Shortening lines. Operating expenses. Maintenance. General land extra gangs. Camp hygiene. Right of way. This course is largely lecture work, using standard text-books and writings. Tratman's Railway Track and Track Work.

(31) Estimates and Specifications.

Two Credits. **Two Hours. Second Semester.**

Principally a lecture course, but supplemented by practical problems for which estimates and specifications must be submitted. Position of engineer in construction. Duties. Estimates. Corrections. Latitude allowed. Contracts. General kinds. Special. Specifications. Definiteness. Lectures on law of contracts. Kirby's Elements of Specification Writing.

(32) Surveying.

One Credit. **Two Hours Laboratory. Second Semester.**

Use and adjustment of tape, level and transit. For Electrical and Mechanical Engineers. Johnson-Smith's Text.

Announcement.

Beginning with the summer of 1919 the University Summer School of Field Work in Civil Engineering will be established in camp at Loyola, in the foothills

of the Santa Cruz Mountains. This camp is so situated as to offer the student exceptionally ideal areas for field work in plain, foothill and mountain. The field work will be conducted by experienced field engineers, who will, in addition to the full technical course, give thorough instruction in practical camping, camp methods and camp hygiene. The course will be four weeks in length and will be obligatory upon both Junior and Senior Classes in Civil Engineering, each class being under separate instructors and doing individual work.

The course will embrace complete topographical surveys, with different instruments, leveling, contouring, railway reconnaissance, preliminary and location survey, cross-sectioning, railway curves, highway surveys and location, maps and profiles, earthwork computation, estimates, watershed computation, irrigation problems and canal surveys, survey and estimate for dams, determination of latitude and longitude, triangulation, base line, geodetic survey of large extent of country, etc.

A full outline of each course and corresponding instructors, date of opening, expenses, etc., will be published in the spring of 1919.

ELECTRICAL ENGINEERING.

(1) Electrical Machinery.

Three Credits. **Three Hours. First Semester.**

Magnetic field. Magneto-motive force. Hysteresis. Elementary dynamo. The magnetic circuit. Armature

core. Commutator. Brush shifting. Sparking at brushes and remedies. Different types of generators. Methods of transmitting, distributing and controlling direct current. Direct current series and parallel systems. Feeders and mains. High tension D. C. systems. Timbie's Elements of Electricity.

(2) Alternating Current Machinery.

Three Credits. **Three Hours.**
Second Semester.

Self and mutual inductance. Capacity. Impedance. Phase angle and power factor. Series of repulsion types. Synchronous motors. Induction motors, single and polyphase. Methods of starting. Speed control. Electric drive for cranes, elevators, presses, pumps, fans, mill-work, etc. Prerequisite Physics (3) and E. E. (1). Christie's Electrical Engineering.

(3) Alternating Currents.

Three Hours Drawing.
Three Credits. **First Semester.**

Electric power systems. Translating, controlling and transmitting equipment. Constant potential and constant current transformers. Efficiency, regulation and protection. Polyphase systems of generation. Two phase and three phase and conversion from one system to another. Calculation of alternating current transmission lines. Regulation of voltage. Power factor of systems. Switch-boards. Apparatus used on switch-boards. Location. Types. Pole lines. Cable and conduit systems. Prerequisites E. E. (2). Christie's Electrical Engineering.

(4) Alternating Currents.

Three Credits. **Three Hours.**
Second Semester.

Continuation of (3).

(5) Telephony.

One Credit. **One Hour.**
First Semester.

The magneto-telephone. The microphone. Carbon transmitters. Induction coils. Call methods. Series and parallel circuits. Subscribers' equipment. Line disturbances. Common battery systems. Exchange equipment. Party lines. Automatic systems. Combined telegraphy and telephony. Wireless telegraphy. Generation of electrical waves. Transmitting and receiving apparatus. Prerequisites Physics (2) and E. E. (1). Electrical Engineer's Handbook.

(6) Design of Direct Current Machinery.

Two Credits. **Four Hours Drawing.**
First Semester.

Electrical and mechanical theory applied to the design of D. C. machinery. Switches, heaters, controllers, etc. Complete calculations and working drawings for a dynamo or motor, to fulfill given specifications. Prerequisite E. E. (1). Gray's Electric Machinery Design.

(7) Power Plant Design.

Two Hours Lecture, Four Hours Drawing.
Four Credits. **Second Semester.**

Design of a complete plant to furnish light and power for a city of a given size. Consideration of the ele-

ments: illumination, charges, operating expenses, income, organization and administration, reports, specifications, contracts and statistics. Prerequisites E. E. (3) and (6). Weingreen's Electric Power Plant Engineering.

(8) Electrical Design.

Two Credits. **Four Hours Drawing. Second Semester.**

Design of alternators, transformers, induction motors and other alternating current apparatus. Thorough investigation and complete design of some unit assigned. Gray's Electric Machinery Design.

(9) Electrical Engineering Laboratory.

Two Credits. **Four Hours Laboratory. First Semester.**

Determination of the resistance of electric circuits. Relation between speed, field strength and voltage. Operation of shunt series and compound-wound generators. Distribution of potential around commutator. Heat runs to determine load capacity. Stray power. Starting boxes. Counter electro-motive force. Shunt, series, compound and differentially wound motors. Operation of shunt and compound wound generators in parallel. Distribution of load. Control of series circuits. Regulation of arc lamps. Constant potential and constant current generators. Prerequisite—must be taking E. E. (1): Wilson's Dynamo Laboratory Outlines and References.

(10) Electrical Engineering Laboratory.

Two Credits. **Four Hours Laboratory.**
Second Semester.

Calibration of ammeters and voltmeters. Calibrations and adjustment of A. C. and D. C. watt-hour meters. Determination of resistances. Measurement of inductance and capacity. Permeability of samples of iron and steel. Determination of hysteresis. Storage Batteries. Testing. Candle-power of lamps from standard candle. Cable testing. Insulation resistance. Practice in operation of A. C. motors, generators and other apparatus. Prerequisite E. E. (9).

(11) Electrical Engineering Laboratory.

Two Credits. **Four Hours Laboratory.**
First Semester.

Alternating current circuits. Inductance, capacity, impedance, phase, relation, true and apparent watts and power factor. Alternators. Magnetization curves. Losses and synchronous impedance. Synchronous motors. Methods of Synchronizing. Methods of starting rotary converters. Compounding. Calculation of efficiency. Alternators in parallel. Transformers. Regulation. Heating and efficiency. Use as induction regulators and phase changers. Wave shapes by instantaneous contact and by the oscillograph. Resonance. Methods of starting induction motors. Efficiency by brake tests. Operation of induction generator. Reports of complete tests on plants.

(12) Electrical Engineering Laboratory.

Two Credits. Four Hours Laboratory.
Second Semester.

Continuation of (11). Prerequisite E. E. (11).

(13) Technical Literature.

One Credit. One Hour.
Second Semester.

Assigned readings and reports from current technical literature.

(14) Electricity.

Two Hours Lecture, Two Hours Laboratory.
Three Credits. Second Semester.

A short course similar to E. E. (1) and E. E. (9) for Civil Engineering Students. Timbie's Elements of Electricity and Clewell's Laboratory Manual.

ENGINEERING MATHEMATICS.

(1) Algebra.

Three Credits. Three Hours.
First Semester.

Complete Algebra to include quadratic equations, then more particularly; ratio and proportion, progressions, imaginary and complex numbers, indeterminate equations, binomial theorem, variables and limits, inequalities, interpretation of results, logarithms, permutations and combinations, indetermined coefficients, determinants and graphic algebra. Brenke's Advanced Algebra and Trigonometry.

(2) Trigonometry.

Two Credits. **Two Hours.**
First Semester.

Development of general formulae. Functions and their relations. Logarithms and their uses. Properties of triangles. Application of principles to practical problems in right and oblique triangles. Navigation in plane trigonometrical problems. Spherical trigonometry. Application to problems in astronomy and spherical mensuration. Brenke's Advanced Algebra and Trigonometry.

(3) Analytic Geometry.

Five Credits. **Five Hours.**
Second Semester.

Loci. Lines. Circle. Different systems of co-ordinates. Conic sections. Supplementary propositions. Loci of second order. Plane curves of higher order. Solid analytical geometry, especially of surfaces of revolution. General equations. Prerequisites Eng. Math. (1) and (2). Riggs' Analytic Geometry.

(4) Calculus.

Four Credits. **Four Hours.**
First Semester.

Fundamental formulae and principles for differential and integral calculus. Maxima and minima. Curvature. Surfaces. Volumes. Intermediate forms. Envelopes. Series. Expansion. Forms of integration. Practical application. Prerequisite Eng. Math. (3). Murray's Calculus.

(5) Calculus.

Four Credits. **Four Hours.**
Second Semester.

Continuation of (4). Prerequisite Eng. Math. (4).

(6) Differential Equations.

Two Credits. **Five Hours.**
Second Semester.

Analysis and deductions of formulae and equations used in physics, mechanics and engineering problems. Applications of formulae and equations given in engineering handbooks to problems. Practical problems and lectures. Prerequisite Eng. Math. (5).

(7) Method of Least Squares.

Two Credits. **Two Hours.**
Second Semester.

Study of the principles and methods. Applications to solution of physical, astronomical, engineering and other problems. The student will be made familiar with this higher and more accurate method of solution of problems in his profession, especially triangulations. Merriman's Method of Least Squares.

ENGLISH.

(1) Composition and Rhetoric.

Four Credits. **Four Hours.**
First Semester.

Lectures and recitations. The invention, arrangement, and presentation of material. The different species of historical, philosophical, scientific, critical, etc., masterpieces.

(2) Composition and Rhetoric.

Four Credits. **Four Hours.**
Second Semester.

Continuation of (1). Prerequisite Eng. (1).

(3) Rhetoric and Literature.

Three Credits. Three Hours.
First Semester.

A course in English Rhetoric and Literature. Students who show any deficiency in English are required to take, in addition, the course in Special Composition. One hour a week is devoted to the study of Engineering Literature.

(4) Rhetoric and Literature.

Three Credits. Three Hours.
Second Semester.

Continuation of (3). Prerequisite Eng. (3).

GEOLOGY.

(1) Geology.

Two Credits. Two Hours.
First Semester.

A course in dynamical, structural and historical Geology. Particular attention is paid to structural Geology and the influences of Instructive and Engineering conditions. The student is made familiar with different stones by illustrating each recitation with specimens of the particular rocks treated, as well as their adaptability in construction, method of occurrence, etc. Ries and Watson's Engineering Geology.

(2) Mineralogy.

Three Credits. Three Hours.
Second Semester.

A course in Mineralogy with access to a large collection of specimens. Determination of unlabeled specimens. Crystallography. Blowpipe analysis. Includes

a short course in Metallurgy. Iron ores and production of iron and steel. Percentage and effects of sulphur, silicon, manganese and carbon in iron and steel. Coals, Coke, Carbons, and ash. Prerequisite Geology (1). Text as in (1).

LAW.

(1) Business Law.

One Credit. **One Hour.**
Second Semester.

A brief course in Contracts, Sales, Negotiable Instruments, Real Estate, Partnership, Corporations and such other subjects as the professor may deem necessary or advisable.

MECHANICAL ENGINEERING.

(1) Mechanical Drawing.

Three Credits. **Six Hours Drawing.**
First Semester.

Freehand lettering. Use of instruments. Plane problems. Freehand sketching. Orthographic, isometric and cabinet projections. Tracing and blue printing. French's Engineering Drawing.

(2) Descriptive Geometry.

Three Credits. **One Hour Lecture, Five Hours Drawing.**
Second Semester.

Orthographic projection of points, lines, planes, warped surfaces, etc., in the four angles of projection. Intersections. Tangents to curves and surfaces. Developments. Practical problems in stereotomy, surveying, architecture, belting, layouts, etc. Prerequi-

sites M. E. (1). Smith's Practical Descriptive Geometry.

(3) Kinematics.

Two Credits. **Two Hours.**
First Semester.

Motion, velocity and acceleration of machine parts. Rolling cylinders and cones. Lobed wheels. Belts. Levers, Cams, Linkwork. Gearing. Parallel and straight line motion. Intermittent linkwork. Aggregate combinations. Prerequisite M. E. (1). Smith & Marx' Machine Design, Mechanism of the Steam Engine by James & Dole.

(4) Machine Drawing.

One Hour Lecture, Four Hours Drawing.
Three Credits. **Second Semester.**

Language of Mechanical Drawing. Conventional method of representing bolts, screws and other standards. Piping. Designing and detailing simple parts to take tension, compression and shear. Study of different methods of drawing and dimensioning found on commercial working drawings. Accuracy, completeness and speed are required. Prerequisite M. E. (3). French's Engineering Drawing.

(5) Machine Design.

Two Credits. **Four Hours Drawing.**
First Semester.

Selection of materials for machine parts. Proper working stress for different materials under dead, repeated and reversed loads. Determination of nature and distribution of stresses in each element of a

machine. Friction. Design of such elements as crank shafts, machine frames, connecting rods, etc., when subject to tension, compression, shear, torsion, bending or any combination of these. Figuring weight and cost of manufacture. The kinematic layout of a machine for functional operation. The evolution of a design from preliminary sketch to complete working and assembly drawings, involving a study of strength, adaptability, symmetry, ease of operation, depreciation and cost of manufacture. In all this work the note-book is as important as the drawings. Prerequisite M. E. (4). Benjamin and Hoffman's Machine Design.

(6) Machine Design.

Three Credits. One Hour Lecture, Four Hours Drawing. Second Semester.

Continuation of (5). Prerequisite M. E. (5).

(7) Machine Design.

Two Credits. Four Hours Drawing. First Semester.

Continuation of (6). Prerequisite M. E. (6).

(8) Power Plant Design.

Two Credits. Two Hours. Second Semester.

Sites. Comparison of high-speed engines. Corliss engines, steam turbines and gas engines. Cost and adaptability of different types of steam boilers. Condensers. Economizers. Superheaters. Pumps. Stokers. Piping. Complete layout of a plant with specifications and advertisement for bids. Fernald and Orrok's Power Plants.

(9) Review of Engineering Industries.

One Credit. **One Hour.**
First Semester.

Lectures and assigned reading on Engineering studies and work. This course is designed to teach the student how to study and to enable him to make a rational choice of a course of study.

(9a) Review of Engineering Industries.

One Credit. **One Hour.**
Second Semester.

Continuation of (9).

(10) Shopwork.

Two Credits. **Four Hours Laboratory.**
First Semester.

Woodworking. Proper use and care of bench tools. Exercises in planing, squaring and simple joinery. Layout of all work from blue-prints.

Woodturning. Operation and care of turning lathe and tools. Exercises in woodturning and finishing.

(11) Shopwork.

Three Credits. **Six Hours Laboratory.**
Second Semester.

(a) Forging. Management of the forge fire. Exercises in Drawing, Upsetting, Shaping, Swaging and welding. Hardening and tempering. Forging characteristics of different grades of iron and steel.

(b) Patternmaking. Operation and care of power woodworking machinery. Theory of patternmaking and moulding. Construction of simple wood patterns and core boxes. All work laid out from blue-prints.

(12) Shopwork.

Two Credits. **Four Hours Laboratory. First Semester.**

Foundry practice. Floor and bench moulding. Casting of brass, bronzes and alloys. Dry and green sand core work. Core making. Shop visits.

Prerequisite M. E. (11).

(13) Shopwork.

Two Credits. **Four Hours Laboratory. Second Semester.**

(a) Patternmaking. Continuation of M. E. (11). (b) Advanced practice in all types of woodpatterns and core boxes. All layouts from working drawings.

(b) Machine shop practice. Operation and care of metal working machinery. Machining, drilling, chipping and filing. Calipering, gauging and fitting. Assembling and rigging. Shop visits.

Prerequisite M. E. (11) and (12).

(14) Shopwork.

Two Credits. **Four Hours Laboratory. First Semester.**

(a) Machine shop practice. Continuation of (b) M. E. (13).

(b) Shop management. In this course the student is given certain tasks and shopwork assignments to carry out and oversee. The system involves Managing, Planning, Routing, Stock and Tool Room methods, Production and Time Records, and actual supervising and handling of lower classmen. Shop visits. Lectures.

Prerequisite M. E. (13).

(15) Mechanical Engineering Laboratory.

Two Credits. **Four Hours Laboratory. First Semester.**

Method of investigation. Classification of errors. Accuracy of numerical calculations. Autographic diagrams. Calibration of pressure gauges, thermometers, pyrometers, indicator springs, tachometers, planimeters, weirs, nozzles, orifices, pitot tubes, Venturi meters and dynamometers. Testing of lubricants. Density, viscosity, gumming, fire-test and cold test. Measurement of power by the prony brake, Alden brake, traction dynamometers and transmission dynamometers. Belt testing. Measurement of flow of liquids and gases by means of meters, nozzles, pitot tubes, etc. Moisture in steam by barrel, Hoadley, Barrus, throttling, separating and chemical calorimeters. Heating value of coals determined by the bomb calorimeter. Heating value of gas by Junker's calorimeter. Flue gas analysis with Orsat's apparatus. Complete tests of steam engines, boilers, gas engines, injectors, pumps and entire plants. Standard reports. Carpenter and Diedrick's Experimental Engineering.

(16) Mechanical Engineering Laboratory.

One Credit. **Two Hours Laboratory. Second Semester.**

Continuation of (15). Prerequisite (15).

(17) Mechanical Engineering Laboratory.

Two Credits. **Four Hours Laboratory. First Semester.**

Continuation of (16). Prerequisite M. E. (16).

(18) Boilers.

Two Credits. Two Hours.
First Semester.

Heat; conduction, convection and radiation. Heat of evaporation. Combustion. Smoke. Quantity of air required. Methods of firing. Classification of coals. Efficiency of combustion. Boiler horse-power. Types of boilers. Furnaces. Stokers. Draft. Boiler Scale. Water purification. Explosions. Testing. Care of Boilers. Prerequisite Physics (1). Gebhardt's Power Plant Engineering.

(19) Steam and Gas Machinery.

Three Credits. Three Hours.
Second Semester.

Properties of steam. Slide-valve. Indicator. Simple and compound engines. High speed, Corliss and marine engines. Turbines. Steam pumps. Locomotives. Valve gears. Governors. Flywheels. Balancing. Steam engine performance. Operation of two and four cycle gas and oil Engines. Indicator analysis. Prerequisite M. E. (18). Gebhardt's Power Plant Engineering.

(20) Thermodynamics.

Four Credits. Four Hours.
First Semester.

Mechanical theory of heat. First and second laws of thermodynamics. Perfect gases. Saturated vapors. Superheated vapors. Hot air engine. Internal combustion engine cycles. Influence of engine cylinder walls. Friction of engines. Refrigerating machines. Injectors. Steam turbines. Prerequisite M. E. (19). Ennis' Applied Thermodynamics.

(21) Internal Combustion Engines and Automobiles.

Two Credits. **Two Hours. First Semester.**

The theory and design of gas, gasoline and oil engines, gas producer practice; the combustion of gaseous fuels. Prerequisite M. E. (20). Streeter's Internal Combustion Engines.

(22) Hydraulic Motors.

Two Credits. **Two Hours. Second Semester.**

Action of water on curved vanes. Forces developed and effect of impact. Work done. Centrifugal action. Reaction turbines. Vane form and arrangement. Axial, radial and mixed flow wheels. Losses due to friction, shock, leakage and residual velocity. Impulse turbines. Experiments with turbines of various types. Governors. Centrifugal pumps. Theory. Radial and curved vanes. Velocity of flow. Volute. Diffuser. Guide vanes in diffuser. Impeller passages. Balancing. Losses. Efficiency. Selection and arrangement of water-wheels. Governors and auxiliary apparatus. Relation between available water supply, possible output and perfection of development work. Draft tubes. Stop valves. Gates. Vacuum and pressure relief stand pipes. Analysis of typical installations. Water power costs.

Prerequisite C. E. (21). Daugherty's Hydraulic Motors.

(23) Industrial Engineering.

Two Credits. **Two Hours. First Semester.**

The economic element in shop processes. Condi-

tions for most economic production. Functional operation of machine tools. Limits of economic production. Machines for performing specific operations. Time study. Labor saving devices in the shop. Distribution of cost of machine production between different processes, power, labor and material. Fixed charges. Layout of shops for most direct production. Layout of system of management and cost determining system. Prerequisite M. E. (13). Diemer's Factory Organization and Administration.

(24) Industrial Engineering.

Three Credits. Three Hours.
Second Semester.

Continuation of (23). Prerequisite M. E. (23). Galbreith's Time Study.

(25) Heating and Ventilation.

Two Credits. Two Hours.
First Semester.

Theory and design of the various systems for heating and ventilating buildings, including Hot Air, Hot Water, Steam and the plenum and vacuum systems, and central station heating. Hoffman's Handbook for Heating and Ventilating Engineers.

(26) Heating and Ventilation.

Two Credits. Two Hours.
Second Semester.

Continuation of (25). Prerequisite M. E. (25).

(27) Technical Literature.

One Credit. One Hour.
Second Semester.

Reading and reports from current Engineering literature.

MODERN LANGUAGES.

(1) French.

Four Credits. **Four Hours. First Semester.**

In this course the student is carefully drilled in elementary grammar up to the irregular verbs, attention also being given to acquiring a vocabulary of the more common words.

(2) French.

Four Credits. **Four Hours. Second Semester.**

A continuation of the preceding course. Special attention is given to the more important irregular verbs, the memorizing of words, and translation of French into English and vice versa.

(3) German.

Four Credits. **Four Hours. First Semester.**

Elements of German grammar. Drill in pronunciation. Vocabulary.

(4) German.

Four Credits. **Four Hours. Second Semester.**

A continuation of Course 3. Syntax. Oral and written exercise. Reading from the more simple German prose.

(5) Spanish.

Four Credits. **Four Hours. First Semester.**

Elements of Spanish grammar. Drill in pronunciation. Vocabulary. Translations.

(6) Spanish.

Four Credits. Four Hours.
Second Semester.

Continuation of (5).

PHILOSOPHY.

(1) Logic.

Four Credits. Four Hours.
First Semester.

The reasoning faculties and processes. Laws of thought. Truth. Certitude. Doubt. False systems.

(2) Ontology. Psychology.

Five Credits. Five Hours.
Second Semester.

Being, its origin, development, explanation. Life, its origin and kinds. Origin of Species. Darwinism. Huxley. Haeckel. The Soul, its origin and spirituality.

(3) Theodicy.

Four Credits. Four Hours.
First Semester.

God, His existence, nature and attributes. Creation. Providence. Miracles.

(4) Ethics.

Four Credits. Four Hours.
Second Semester.

Right and Wrong. Natural Law. Sanction of Law. False norms of Morality. Worship. Homicide. Suicide. Dueling. Society. Marriage. Divorce. Social-

ism. Theories of Government. Suffrage, Liberty of the Press. Church and State.

PHYSICS.

(1) Mechanics, Molecular Physics, Sound.

Three Hours Lecture, Four Hours Laboratory.
Five Credits. First Semester.

General principles of matter. General properties of Bodies. Equilibrium. Gravity. The balance. Laws of falling bodies. Pendulum. Properties peculiar to solids. Hydrostatics. Capillarity, endosmose, diffusion, absorption. Hydro-dynamics. The properties of gases. Barometers. Measurement of the elastic force of gases. Aerodynamics. Production, propagation and reflection of sound. Measurement of the number of vibrations. The physical theory of music. Prerequisite—must be taking Eng. Math. (4). Reed & Guthe's Physics.

(2) Light, Heat, Electricity.

Three Hours Lecture, Four Hours Laboratory.
Five Credits. Second Semester.

Transmission, velocity, intensity and reflection of light. Mirrors. Single refraction. Lenses. Dispersion and achromatism. Optical instruments. The eye. Sources of light. Phosphorescence. Double refraction. Interference and polarization. Properties of magnetism. Methods of magnetism. Laws of magnetic action. Terrestrial magnetism. Fundamental principles of frictional electricity. Quantitative laws of electric action. Distribution. Electro-static induc-

tion of influence. Electric machines. Condensation of electricity. Voltaic cell. Its modifications. Magnetic field due to current. Galvanometers. Ohm's law. Conversion of electric energy and heat. Thermo-electricity. Electro-dynamics. Electro-magnets. Magnetization of iron. Telegraphy. Electro-magnetic induction. Passage of electricity through gases. Magneto and dynamo electric machines. Diamagnetism. Connection between electricity and light. Physiological action of the current. Animal electricity. Prerequisite Phy. (1). Reed & Guthe's Physics.

(13) Electric Measurements.

Two Credits. **Two Hours. First Semester.**

Elementary electro-statics. Electrification by friction, conduction and induction. Magnetism. Determination of horizontal force ond magnetic moment. Fundamental experiments in Voltaic electricity. The galvanoscope and the galvanometer. Determination of E. M. F. Wheatstone's bridge. Calibration of galvanoscope. Measurements of resistance. The high resistance differential astatic galvanometer. Measurement of galvanometer resistance. Thomson's method. Differential method. Use of slide meter bridge. Carey Foster's method. Measurement of very low resistances. The method of comparison of potentials, projection of equal potentials and auxiliary conductors. Measurement of high resistance. The direct deflection method. Electrolyte resistance. Electrolytic resistance by alternating currents. The tangent galvanometer. Use of the standard galvano-

meter and the determination of E. M. F. Application of Joule's law. Use of potential galvanometer. Determination of the magnetic elements. Electro-magnetism and electro-magnetic induction. Action of linear current on magnet. Biot and Savart's law. Proof of electro-magnetic laws. Magnetic action of a solenoid. Laws of the electro-magnet. Induction experiments. Induction balance of Hughes. Damping. Comparison of resistance by magneto conductor. Use of earth inductor. Study of magnetic distribution. The condenser. Determination of the absolute capacity of a condenser. Electrometers. Prerequisite Phys. (2). Reed & Guthe's Physical measurements.

POLITICAL ECONOMY.

(1) Political Economy.

One Credit. **One Hour. Second Semester.**

Object. Production, distribution, circulation and consumption of wealth. Production of wealth. Earth and natural agents. Labor and industry. Capital. Distribution of wealth. Individual property. Share of laborers. Circulation of wealth. Exchange. Taxes. Applications. This course is designed to give the student a broader view of his standing as a professional man in the community.

SENIOR HALL, UNIVERSITY OF SANTA CLARA, LOOKING SOUTH

Institute of Law

INSTITUTE OF LAW

PURPOSES AND METHOD OF THE INSTITUTE OF LAW.

The purposes of the Institute of Law are:

To give a thorough training in the fundamental principles of English and American law, and the modifications thereof peculiar to the State of California;

To guide the student by actual practice in office work and court procedure to a proper application of the principles of law to concrete cases;

Finally, to imbue the student with the correct ethical principles that should govern the legal profession.

The method of instruction followed is the Case system,—an exact discussion of the cases presented in the best manuals with a view to deriving the principles which have determined their decision. This study of rules and principles is never lost sight of by the Professor and is rigidly exacted from the student in all examinations.

PRACTICE COURT.

The Institute of Law maintains a system of practice courts which is modeled essentially on the California system of courts of record, and consists of the Superior Court, the District Court of Appeal and the Supreme Court.

The Superior Court is presided over by a member of the Faculty, at present Hon. William Arthur Beasly,

Judge of the Superior Court, San Jose, Cal. The court holds weekly sessions at which business is transacted in the manner usual before state courts, with the constant instruction, advice and correction of the presiding judge. On given statements of fact, student counsel issue, serve and return regular process, prepare and file the proper pleadings according to the California Code practice, argue demurrers, impanel juries, examine witnesses, and in brief, carry their cases through from summons to final judgment.

Every student in good standing is admitted to the bar in the middle of his second year in the school, and is required to act as counsel in not less than two cases in every semester. Subordinate officers of the court, clients, witnesses, and jurymen are drawn from among the second year students. All students except those of the first year, are required to attend every session of the courts and they receive credit therefor.

The District Court of Appeals and the Supreme Court hold sessions as often as business requires. They are also under the general supervision of a member of the Faculty, at present Hon. John E. Richards, Associate Justice of the District Court of Appeals for the First Appelate District.

Court is held in a specially furnished court-room.

Lectures on particular phases of the law are given from time to time by the Faculty and by occasional lecturers.

PHILOSOPHY AND POLITICAL ECONOMY.

Thorough courses in Philosophy and Political Economy covering a period of two years are offered by the University in the College of Philosophy and Letters.

All law students who are candidates for the Degree of Bachelor of Arts or Bachelor of Science are required to follow these courses.

Other law students are urged to do so but not obliged.

The Faculty strongly recommend all students to take advantage of these courses because they are of great value in developing the reasoning faculties and in grounding the student in sound principles of ethical conduct—two things absolutely necessary to the soundest and highest success in the legal profession.

SESSIONS AND HOURS.

The school year in the Institute of Law is the same as that for the University in general. It consists of two semesters:

The first semester begins August 19th, 1918, and ends December 21st, 1918.

The second semester begins January 7th, 1919, and ends May 21st, 1919.

The recess at Thanksgiving begins November 26th, 1918, and ends November 29th, 1918.

The recess at Christmas begins December 21st, 1918, and ends January 6th, 1919.

The recess at Easter begins April 16th, 1919, and ends April 21st, 1919.

Classes in Philosophy and Political Economy are held during morning hours except on Wednesdays. The length of the periods is fifty minutes.

Classes in legal subjects are held every evening, Wednesday included, at 6:55, and also on Saturday afternoon at 2:30. The length of the period varies from one to one and one-half hours. There are two

such periods every evening, making a total of fourteen class-hours in legal subjects.

ENTRANCE REQUIREMENTS.

The Institute of Law is open to the following classes of students:

1st. Those who have the degree of Bachelor of Arts, Bachelor of Science, or their equivalent, from this or some other college or university.

2d. Those who have completed the first two years of college work either at this University or at some other college or university, offering satisfactory courses leading to academic degrees. Students of this class may complete their college work by following the Junior and Senior courses in Philosophy in the College of Arts and Sciences, and thus receive the degree of Bachelor of Arts or Bachelor of Science at the end of their second year in the Institute of Law and the degree of Juris Doctor or Bachelor of Laws (according to their qualifications) at the end of the third.

Students of the first and second classes are **regular students.**

3d. Those whose experience in business or whose private study has made up for their lack of collegiate training and whose maturity and seriousness fit them in the discretion of the Faculty, for the study of law. Such are for example young men employed in insurance and real estate offices, banks, railroad offices and law firms, as well as those who have studied privately and so acquired knowledge for which, because of its variety and mode of acquisition, educational institu-

tions are unable, as a rule, to give credit. These are **special students.**

Advanced standing. Any person who, after becoming entitled to enter the Institute of Law as a regular or special student, has been in regular attendance for at least one academic year at another law school, having similar admission requirements, may in the discretion of the Faculty of the Institute of Law, and on such terms, with or without examination, as it may prescribe, receive credit for the work done at such other law school not exceeding in any case two years. The last year must be spent in residence in the Institute of Law.

THE COURSES.

New subjects are entered upon at the beginning of each semester, thus ensuring concentration of attention on a few subjects at a time, and also making it convenient for students to enter in January as well as in August.

Pre-Legal.

Elementary Law. Dean Campbell.

Three Hours, Two Semesters.

This course is given principally to students in the Sophomore year of the College of Letters and of General Science, who intend to enter the Institute of Law in the next year.

Robinson's Elementary Law, 2d Ed.

Mental Philosophy, Moral Philosophy. Psychology and Political Economy.

The regular courses in these subjects, given in the College of Letters and of General Science, are open to all students of the Institute of Law.

First Year.

The subjects taught in the first year of law do not vary from year to year.

(1) Criminal Law. Professor Sex.
One and One-Half Hours, First Semester.

Mikell's Cases on Criminal Law and Procedure.

(2) Criminal Procedure. Professor Sex.
One and One-Half Hours, Second Semester.

This course is conducted in a practical manner and includes the preparation of criminal pleadings, and the court work incidental to trials for crime. The professor sits as judge, with the students as officers, jurors and witnesses.

Penal Code of California and selected California Cases.

Mikell's Cases on Criminal Law and Procedure.

(3) Torts. Professor Jones.
Five Hours, Second Semester.

Burdick's Cases, Third Ed.

(4) Property I. Professor Rankin.
Four Hours, First Semester.

Warren's Cases.

(5) Agency. Professor N. Bowden.
Three Hours, Second Semester.

Huffcut's Cases.

(6) Common Law Pleading. Professor Richardson.
Four Hours, First Semester.

Sunderland's Cases.

(7) Contracts and Quasi-Contracts. Dean Campbell.
Three Hours, Both Semesters.

Huffcut & Woodruff's Cases, 2d Ed.

(8) Debating.
One and One-Half Hours, Both Semesters.

Second and Third Years.

The following subjects are pursued together by the students of the second and third years, except as noted, and while all of these subjects are not given in any single year, the course is so varied that every student by the end of his third year has seen all the important branches of the law.

(9) Practice Court. Judge Beasly.
One and One-Half Hours, Both Semesters.

All second year students are admitted to practice at the first session of the Practice Court for the second semester.

(10) Debating.
One and One-Half Hours, Both Semesters.

(11) Domestic Relations. Professor Rankin.
Two Hours, One Semester.

Woodruff's Cases, 2d Ed.

(12) Trusts. Professor Jones.
Three Hours, Second Semester.

Kenneson's Cases.

(13) Code Pleading. Professor Richardson.
Four Hours, One Semester.

Sunderland's Cases.

(14) Constitutional Law. Professor Coolidge.
Three Hours, One Semester.

Boyd's Cases, 2d Ed.

(15) Private Corporations. Professor Coolidge.
Three Hours, One Semester.

Richard's Cases.

(16) Wills and Probate Law. Professor Jones.
Three Hours, One Semester.

Costigan's Cases.

(17) Evidence. Dean Campbell.
Four Hours, One Semester.

Wigmore's Cases, 2d Ed.

(18) New Trial and Appeal. Professor Richardson.
Two Hours, One Semester.

Lectures and Code of Civil Procedure and California Cases.

(19) Equity. Professor Coolidge.
Three Hours, First Semester.

Throckmorton's Cases and Eaton on Equity.

(20) Equity Pleading. Professor Richardson.

Lectures and syllabi of Professor.

(21) Bills and Notes. Professor Rankin.
Three Hours, Second Semester.

Bunker's Cases.

(22) California Practice. Professor Richardson.
Four Hours, Second Semester.

Lectures, Code of Civil Procedure of California and Selected California Cases.

(23) Property II. Dean Campbell.
Five Hours, First Semester.

Finch's Cases.

(24) Conflict of Laws. Professor Coolidge.
Two Hours, One Semester.

Dwyer's Cases, 2d Ed.

(25) Partnership. Professor N. Bowden.
Two Hours, First Semester.

(26) Insurance. Professor Bloomingdale.
Two Hours, One Semester.

Richard's Cases.

(27) Sales. Professor Bloomingdale.
Three Hours, First Semester.

Burdick's Cases, last Ed.

(28) Mortgages. Professor Bloomingdale.
Two Hours, Second Semester.

Kirchway's Cases.

(29) California Probate Procedure.
Professor Richardson.
Two Hours, Second Semester.

Syllabi, Lectures, Selected Cases.

The following additional work must be done privately under the supervision and direction of a member of the Faculty, by all candidates for the degree of Juris Doctor:

(30) Roman Law.

Synopsis, quiz and written examinations as in other law courses, i. e., monthly and at the end of each semester.

Sohm's Institutes of Roman Law (Ledlie), 3rd Edition.

(31) International Law.

Synopsis, quiz and written examinations as in other law courses, i. e., monthly and at the end of each semester.

Taylor's International Law, "Cyc", "International Law", "War".

(32) History of English Law.

Synopsis, quiz and written examinations as in other law courses, i. e., monthly and at the end of each semester.

Pollock & Maitland.

(33) Thesis. See page 160, sec. 3.

SUMMARY OF COURSES TO BE GIVEN IN 1918-1919.

	Hours 1st Semester.	Hours 2d Semester.
Pre-Legal.		
Elementary Law	3	3
First Year.		
Criminal Law	1½	
Criminal Procedure		1½
Torts		5
Property I	4	
Agency		3
Common Law Pleading	4	
Contracts	3	3
Debating	1½	1½
	14	14
Second Year.		
Evidence	2	2
Conflict of Laws	2	
Constitutional Law		3
Code Pleading	4	
California Practice		4
Wills and Probate	3	
Domestic Relations		2
Practice Court	1½	1½
Debating	1½	1½
	14	14

	Hours 1st Semester.	Hours 2d Semester.
Third Year.		
Evidence	2	2
Conflict of Laws	2	
Constitutional Law		3
Code Pleading	4	
California Practice		4
Wills and Probate	3	
Domestic Relations		2
Partnership	2	
Insurance		2
Practice Court	1½	1½
	14½	14½

EXAMINATIONS.

Written examinations are held monthly in all subjects. Written examinations are also held twice a year on the work of the preceding semester.

Oral examinations. In addition to the above-mentioned written examinations, at the end of the school year, each student must present himself before an examining board of not less than three members of the Law Faculty and be orally examined by them for forty minutes on the work of the past school year.

The general provisions set out elsewhere in this catalogue relating to Examinations, Promotions, Conditions and Re-examinations, Attendance and Credits, apply to all students of the Institute of Law. Reference is made to them for fuller information. See page 39.

GRADUATION.

The Faculty of the University reserve the right to make the conditions stricter than they now are for entrance and for graduation, and to provide if they see fit, that such changes when made shall effect all students enrolled in the Institute of Law on or after September 2, 1914.

The Faculty is now considering the advisability of increasing the time of study for graduation in law to FOUR YEARS, and this change if made, will affect all students entering the Institute of Law on or after August 18, 1915.

The following regulations shall apply to all students who enter the Institute of Law on or after September 2, 1914:

In order to graduate or receive the certificate, the student must have completed the regular course of the Institute of Law. This implies:

1. Credit for at least eighty-four credit hours (a credit is the equivalent of one hour a week for one semester). No one is allowed a credit in any course at which he has not been present ninety per cent of the class hours, and in which his average is not at least passing (seventy per cent).

2. Residence of at least three years in a standard law school, one year of which must have been spent in this Institute of Law.

3. The submission of a satisfactory thesis on some legal question selected by the student and approved by the Faculty. Said thesis must be submitted in accord with the following

Regulations.

The thesis must contain not less than five thousand words.

It must represent original work and thought.

It must consist of a thorough discussion of the cases bearing upon the subject, and must not be a mere series of extracts from cases or treatises, loosely strung together.

Pertinent authorities must be cited by giving the volume and page, and also the particular page referred to. In addition to the ordinary citation, the writer should also give the place where the same case may be found in the selected case series and the Reporter system.

It must be in typewriting on paper 8½ by 11 inches in size.

The submission of an acceptable thesis is an absolute pre-requisite to admission to final examinations.

4. In addition to the above requirements, candidates for the Juris Doctor degree must pass all required tests in Roman Law, International Law, and the History of English Law.

DEGREES AND CERTIFICATES.

Having thus qualified for graduation, the student will be given either the Degree Juris Doctor (J. D.), the Degree of Bachelor of Laws (LL.B), or a certificate stating that he has satisfactorily completed the course in legal subjects given in the Institute of Law.

The Degree of **Juris Doctor** will be conferred upon the following classes of students providing they have

complied with Section 4 of the conditions of graduation:

1st. Those who entered with the degree of A. B. or B. S., or their equivalent from this University or a college or university of recognized standing.

2d. Those who, having entered with credit for the first two years of college work have completed the courses in Philosophy and Political Economy along with their legal studies and have received the degree of A. B. or B. S. from this University.

The Degree of **Bachelor of Laws** will be conferred upon the following classes of students:

1. Those possessing other academic degrees as just explained, who have not complied with Section 4 of the conditions of graduation.

2. Those who, having entered after the completion of the first two years of college work, have confined themselves to law and have maintained throughout their course on average of eighty-five per cent in each subject separately.

3. Those who, having entered after the completion of the first two years of college work have done satisfactory work in some subjects included in the courses in Philosophy and Political Economy, such work being insufficient to warrant conferring on them the degree of A. B. or B. S., and who have, in addition, maintained throughout their course an average of eighty-five per cent in every legal subject. Where a student has done such work, but, while reaching a passing mark, has fallen below said average of eighty-five per cent in every legal subject, he may nevertheless be awarded the degree of Bachelor of Laws, by special action of

the Faculty, the degree of allowance made him being proportioned to the number of hours' work satisfactorily done in Philosophy and Political Economy.

The **Certificate** will be conferred upon the following classes of students:

1. Special students who have throughout their course maintained an average of eighty-five per cent in every legal subject.

2. Special students, who, in addition to their work in law have done satisfactory work in the courses in Philosophy and Political Economy or some subjects included therein, and who have also maintained an average of eighty-five per cent in every legal subject. Where a student has done such work, but, while reaching a passing mark has fallen below said average of eighty-five per cent in every legal subject, he may nevertheless be awarded the certificate, by special action of the Faculty, the degree of allowance made him being proportioned to the number of hours' work satisfactorily done in Philosophy and Political Economy.

THE DISTRICT COURT OF APPEAL

of the

UNIVERSITY OF SANTA CLARA

1917-1918

HON. JOHN EVAN RICHARDS, A. B., LL. B.,
Presiding Judge.

Leo Louis Gairaud, B. S. '17, Clerk.
Ronald Grant Stewart, A. B. '17, Reporter.
Theodore William Ryan, B. S. '17, Bailiff.

THE SUPERIOR COURT

of the

UNIVERSITY OF SANTA CLARA

1917-1918

HON. WILLIAM ARTHUR BEASLY, LL. B.,
Judge.

Edward Lorigan Nicholson, Clerk.
John Charles Murphy, Bailiff.

REGISTER OF LAW STUDENTS.

Ext.—Student residing outside the University.
Res.—Student residing within the University.
Jr.—In Junior Philosophy and Political Economy.
Sr.—In Senior Philosophy and Political Economy.

Fourth Year.

Speciale, Orvis Humphrey	LL.B. '17	Ext.	San Jose

Third Year.

Chargin, Victor Anthony	A. B. '14	Ext.	San Jose
Gairaud, Leo Louis	B. S. '17	Ext.	San Jose
Jensen, Elmer Darrell	B. S. '17	Ext.	San Jose
Ryan, Theodore William	B. S. '17	Ext.	San Diego
Stewart, Ronald Grant	A. B. '17	Ext.	San Jose

Second Year.

Bolter, Lemuel Rose			
	A. B. '18 (Stanford) Sr.	Ext.	Logan, Io.
Coyle, Cyril Abbott	Sr.	Res.	Sacramento
Desmond, Earl Daniel	Jr. Spec.	Res.	Sacramento
Desmond, Gerald Morley		Res.	Sacramento
Johnson, Hilding Edmond	Sr.	Ext.	San Jose
Lyon, William Penn	Spec.	Ext.	Edenvale
Muldoon, William Scully	Sr.	Res.	Berkeley
Murphy, John Charles	Sr.	Res.	Milpitas
Nicholson, Edward Lorigan	Sr.	Ext.	San Jose
O'Neill, Francis Thomas	Sr. Spec.	Res.	San Francisco
Prothero, Adrian Vere	Sr.	Res.	San Francisco
Quill, Albert Aloysius	Sr.	Res.	Crockett
Ryan, Daniel James	Sr.	Res.	Novato
Scholz, Rudolph John	Sr.	Res.	Medford, Ore.
Tremaine, Robert Edward	Sr.	Res.	Susanville

First Year.

Camarillo, Frank Adolph	Jr.	Res.	Camarillo
Daly, William Darrell	Jr.	Res.	San Francisco
Diaz, Demetrio	Jr.	Res.	Tampico, Mex.
Fair, Raymond Milton	Spec.	Ext.	San Jose
Gagan, Brian Eugene	Jr.	Res.	San Anselmo
Howard, Richard Craig	Jr.	Res.	Vallejo
Korte, Norbert Joseph	Jr.	Res.	Seattle, Wn.
Muldoon, John, Jr.	Jr. Spec.	Res.	Berkeley
Sullivan, William Ward	Jr.	Ext.	Santa Clara

School of Pedagogy

SCHOOL OF PEDAGOGY

The growing demand for young men in the teaching profession, in which male teachers are comparatively few, is being met by the Colleges and Universities of the United States in various ways.

The University of Santa Clara has not neglected to do her part in this work, though for the most part her graduates who have entered the teaching profession have found congenial employment in the Preparatory or High School of the University. With the growth of the teaching profession and the increased demand for male teachers and the increased salaries offered teachers, it is but natural that in the coming years an ever increasing number of young men will elect to follow this noble calling which possesses such a fascination for men who have the gifts requisite for such work.

The University offers the following special courses in pedagogy. The student will find in them in due proportion the history, theory and practice of education. The practical work in education is conducted in the Preparatory Department of the University, under the direction of experienced teachers.

(1) History of Education.

Three Credits. **Three Hours, One Semester.**

A historical treatment of the various systems of education in ancient, medieval and modern times.

(2) Systems of Education.

Two Credits. **Two Hours, One Semester.**

A study of the principal systems of education. The various principal systems are first studied by themselves and then a comparative study is made.

(3) Educational Psychology.

Three Credits. **Three Hours, One Semester.**

A brief course in psychology and the bearing of certain psychological facts on the work of education. Mental development. Instincts. Individuality.

(4) Child Study.

Two Credits. **Two Hours, One Semester.**

A special course in the psychology of childhood. Physical and mental development.

(5) Philosophy of Education.

Two Credits. **Two Hours, One Semester.**

The definitions of education. False notions of education. The principles underlying all education.

(6) Education in Theory and Practice.

Two Credits. **Two Hours, One Semester.**

A more detailed study of the theory of education; educational methods. Actual practice in the classroom.

(7) Classroom Management.

Two Credits. **Two Hours, One Semester.**

Discipline. Order. Forms of discipline. Factors in discipline.

(8) High School Administration.

Two Credits. **Two Hours, One Semester.**

History and place of the High School in the American Educational System. Programs of Studies. Divisions of time. Order of Classes. Marking of pupils. Records. Reports. Texts. Teachers.

Pre-Medical Course

The Pre-Medical Course

The course is designed to comply with the requirements of the best medical schools in the United States, and to give the student a preliminary laboratory training which will familiarize him with future work.

FRESHMAN YEAR.

Before entering upon their Freshman year the students must have completed the regular High School curriculum of the College, or an equivalent amount to 16 units as described on page 52, consisting of courses in English Literature, the Classics, History, English Composition, Mathematics, German or French.

These same subjects are continued during the Freshman and Sophomore years. During the Junior and Senior years, besides the work outlined above, they receive thorough courses in Logic, Ontology, Psychology, Ethics and Political Economy to the amount of ten semester hours.

For the courses in Literature, History and Philosophy see these subjects in the College of Philosophy and Letters and General Science.

CHEMISTRY.

(a) General Inorganic Chemistry.

Six Credits. Lecture Three Hours, One Year.

Fundamental laws of Chemistry. Chemical problems and equations. Study of the elements and principal compounds.

(b) General Inorganic Chemistry.

Two Credits. **Laboratory Four Hours, One Semester.**

(This course accompanies course 1.)

Practical demonstrartion of Chemical Laws and Theories. Preparation of principal elements and compounds, together with the practical demonstration of their properties, tests, combinations and decompositions.

(c) Qualitative Analysis.

Two Credits. **Laboratory Four Hours, One Semester.**

Wet method. Detection of metals. non-metals and acid radicals. Use of the blow-pipe.

(See Courses 1, 2, 3, 6, in Chemistry, pages 73 and 74.)

SOPHOMORE YEAR.

PHYSICS.

Lecture Three Hours.

Ten Credits. **Laboratory Four Hours a Week, One Year.**

Mechanics, Sound, Light, Heat, Electricity, Physical Measurements.

(See Courses 1, 2, 3, 4, in Physics, page 69.)

JUNIOR YEAR.

CHEMISTRY.

1. (a) General Organic Chemistry.

Six Credits. **Lecture Three Hours a Week, One Year.**

Constitution, Classification, Decomposition and Synthesis of Organic Compounds. Paraffins, Olefins, Acetylenes, Terpenes, Benzenes and their derivatives.

(b) General Quantitative Analysis.

Two Credits. Laboratory Four Hours, One Semester.

Gravimetric. Electrolytic. Volumetric methods, Preparation of standard solutions.

(c) General Experimental Organic Chemistry.

Two Credits. Laboratory Four Hours, One Semester.

Practical demonstrations of properties, tests, combinations and decompositions of organic compounds. Preparation and a study of typical organic substances.

(Courses 2 and 3 accompany Course 1.)

(See Courses 7, 8, 9, in Chemistry, pages 74 and 75.)

GENERAL BIOLOGY.

2. This course is divided into two semesters, the first of which is occupied mainly with Structural and Physiological Botany, and the second with Zoology and a brief course in Cytology. Seven hours a week are devoted to the subject, this time being divided between lectures and laboratory at the discretion of the Professor.

First Semester.

(a) Lecture and Laboratory, Seven and One-Half Hours.
Five Credits. One Semester.

Scope and subdivision of the science. Distinction between Vital and Non-Vital forces. Botany. The seed. Structure. Chemistry of the food supply. Consideration of Dicotyledonous and Monocotyledonous forms. Germination. Chemistry of Germination. Enzymes and Enzymic action. Development of seedling. Photosynthesis. The root and its various forms. Root

hairs and study of Osmosis. The stem. Vascular system and nature of fluid movements. The Leaf. Nature of work and study of Stomata. Consideration of hygroscopic movements. Endogenous and Exogenous growth. Fertilization and structure of the flower. Thallophyta. The Algae. Kelp. Spirogyra. Cladophora and similar types. The Fungi. Reproduction in the Thallyophytes and Evolution of Sex. The Briophyta. Study of methods of reproduction and formation. Pteridophyta. Special study of the Fern. Histology of the Fern. Brief consideration of Zonation.

Second Semester.

(b) **Lecture and Laboratory, Seven and One-Half Hours. Five Credits.** **One Semester.**

The Cell. Anatomy and Metabolism. Protplasm and its nature. Karyokinesis. Cell Continuity. Importance of Cytology to Biology. Phenomena of Maturition. Reproduction. Various theories of Evolution and Heredity. Heredity and Mendelism. Colloidal and Crystalloidal states of matter. The Protozoa. Amoeba. Paramoecium. Vorticella. Porifera, Coelenterata, Echinodermata, Molusca, Arthropoda, The Chordata; a selection is made and dissections required. Dissection and study of the Earthworm. Dissection and study of the Frog or Toad. Dissection and study of the Cat or Rabbit. Brief Comparative Anatomy. Personal Hygiene.

SENIOR YEAR.

HISTOLOGY, BACTERIOLOGY AND EMBRYOLOGY.

3 (a) General and Special Histology.

Five Credits. **Lecture Two and One-Half Hours, One Year.**

The Cell. Epithelial, Connective, Muscle and Nerve Tissues, Circulatory and Lympathic Systems. Ailmentary Tract. Digestive Glands. Respiratory, Urinary and Genital System. Skin and its appendages. Eye, Ear, Senses of smell, touch and taste.

(b) Histology.

Three Credits. **Laboratory Six Hours, One Year.**

Use of microscope. Preparation and examination of stained and unstained tissues. Slide technic with Paraffin and Celloidin. Study of prepared slides.

4 (a) Bacteriology.

Three Credits. **Six Hours, One Semester.**

A course including the history and definition of the science. Nature and classification of bacteria. Their morphology, grouping, mode of multiplication, spore formation, motility. Principles of sterilization. Principles involved in the methods of isolating bacteria.

Study of different culture media. Principles of Aerobic and Anaerobic Cultures. Biological properties of the more important bacteria.

Principles of Toxins, Antitoxins, Agglutinins, Precipitins and Vaccines.

(b) Laboratory.

Technique of bacteriological study. Culture media.

5 (a) Embryology.

Three Credits. **Six Hours, One Semester.**

Cell Division.

Spermatozoon and spermatogenesis. Ovum. Ovulation.

Maturation, Migration and Impregnation.

Segmentation and general development—Foetal membranes. Development of Special Organs.

Heart—Primary and secondary embryonic circulations.

Spinal Cord and Brain—Histogenesis of the Nervous System.

Alimentary and Respiratory Tracts—Mouth, pharynx, oesophagus, stomach, intestines, liver, pancreas.

Urinogenital System—Development of Kidneys, ureter and sex organs.

Development of the Skeletal System—Muscles and special sense organs.

(Development of special organs is an elementary course.)

(b) Laboratory.

Study of chick embryo in living specimen, 24-72 hours incubation.

Study of chick embryo whole mounts, 4 segments to 72 hours. Study of serial, cross and sagittal sections of chick embryo, 4 segments to 72 hours.

Study of early development of organs supplemented by modeling. Dissection of hardened pig embryos.

Military Science and Tactics

MILITARY SCIENCE AND TACTICS

On November 22, 1917, The University of Santa Clara was made a Reserve Officers' Training Corps by a special act of the War Department of the United States.

Its object is to give the student a thorough military training during four years with a view to his becoming an Officer and to equip him to lead and instruct untrained men.

STUDY—The courses in military science and tactics are those prescribed by the War Department.

1. Military Art.

(a) Practical. — Three Hours a Week, One Semester (counting 14 units). Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry Drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) Theoretical. — Two Hours a Week, One Semester. Weight 4.

Theory of target practice, individual and (collective use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

2. Military Art.

(a) Practical. Three Hours a Week, One Semester (counting 14 units). Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); bayonet combat; intrenchment (584-595, Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) Theoretical. Two Hours a Week, One Semester. Weight 4.

Lectures, general military policy as shown by military history of United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations, to include School of Company; camp sanitation for small commands.

3. Military Art.

(a) Practical. Three Hours a Week, One Semester (counting 14 units). Weight 10.

The same as Course 2 (a). Combat firing if practicable, but collective firing should be attempted in indoor range by devices now in vogue at United States Disciplinary Barracks.

(b) Theoretical. Two Hours a Week, One Semester. Weight 4.

United States Infantry Drill Regulations, to include School of Battalion and Combat, (360-622); Small-Arms Firing Regulations; lectures as in (b) course 2; map reading; camp sanitation and camping expedients.

4. Military Art.

(a) Practical. **Three Hours a Week, One Semester (counting 14 units). Weight 10.**

The same as course 2 (a); signaling; semaphore and flag; first-aid. Work with sand table by constructing to scale intrenchments, field works, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) Theoretical. **Two Hours a Week, One Semester. Weight 4.**

Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages, camping expedients); marches and camps (Field Service Regulations and Infantry Drill Regulations).

5. Military Art.

(a) Practical. **Three Hours a Week, One Semester (counting 24 units). Weight 13.**

Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching.

(b) Theoretical. **Two Hours a Week, One Semester. Weight 11.**

Minor tactics; field orders (studies in minor tactics, United States School of the Line); map maneuvers. Weight 8.

Company administration, general principles (papers and returns). Weight 1.

Military History. Weight 2.

6. Military Art.

(a) **Practical.** **Three Hours a Week, One Semester (counting 24 units). Weight 13.**

Same as (a) course 5. Military sketching.

(b) **Theoretical.** **Two Hours a Week, One Semester. Weight 11.**

Minor tactics (continued); map maneuvers. Weight 8.

Elements of international law. Weight 2.

Property accountability; method of obtaining supplies and equipment (Army Regulations). Weight 1.

7. Military Art.

(a) **Practical.** **Three Hours a Week, One Semester (counting 24 units). Weight 13.**

Duties consistent with rank as cadet officers or noncommissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) **Theoretical.** **Two Hours a Week, One Semester. Weight 11.**

Tactical problems, small forces, all arms combined; map maneuvers; court martial proceedings (Manual for Courts-martial).

International relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation and treaties.

Lectures; Psychology of war and kindred subjects.

General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed five lectures).

8. Military Art.

(a) Practical. Three Hours a Week, One Semester (counting 24 units). Weight 13.

Same as course 7 (a).

(b) Theoretical. Two Hours a Week, One Semester. Weight 11.

Tactical problems (continued) map maneuvers. Rifle in war. Lectures on military history and policy.

It is presumed that each member of the Reserve Officers' Training Corps during his academic course has taken one course of equivalent credit in either French, or German, or Spanish.

Special courses can no doubt be arranged at each institution so that specialists will be developed for duties other than those prescribed for reserve officers of the mobile arms.

It must be clearly kept in mind that these courses are arranged so that the standard required will be that for a platoon leader in an Infantry company or of the equivalent unit in the other arms. Such units can not be considered apart from the larger ones, which are made up of a combination of smaller ones. Hence, intelligent teamwork depends on the leaders of smaller tactical units understanding the working of the larger units of their own arm or in combination with the other arms.

The student upon graduation should know what is required of a platoon from the point of view of the company commander, and understand clearly the interior economy of a company. He must know what is demanded of the soldier as an individual and also in combination as part of a larger organization. The last

knowledge should include some idea of the tactical handling of a battalion, of which his company is a smaller unit.

The schedule of training prescribes graded courses covering a period of four years, and instruction will be taken up as follows:

Freshman year, courses 1 and 2 (28 units).
Sophomore year, courses 3 and 4 (28 units).
Junior year, courses 5 and 6 (48 units).
Senior year, courses 7 and 8 (48 units).

DISCIPLINE—Strict military discipline prevails through the day from reveille to taps. This order, however insistent, never becomes irksome. Discharge from the Military Unit carries with it expulsion from the University.

UNIFORM—The cadet must be constantly in uniform, being required to have two suits. On the first, which costs $25, the Government allows approximately $14 commutation. No student will be permitted to have civilian clothes in his possession. A friendly alien will be allowed to participate in the training but must pay in full for his own uniform. See page 36.

Extract from the report of the officer detailed by the United States Government on the inspection made April 19th, 1918:

"The result of the work of the Professor of Military Science and Tactics . . . is hard to praise too highly . . . . The military spirit of the students is being developed and fostered in every way possible and this institution will, in time, be a model of its

class. . . . . The general appearance of the cadets at inspection was excellent. Well set up, well groomed, uniforms clean and well-fitting. . . . A fine looking lot of young soldiers.''

Santa Clara has at present upwards of forty officers and three hundred enlisted men in the service of our country. About thirty-five entered the Reserved Officers Training Corps at Camp Fremont, May 15th, 1918, in consequence of the recommendation of the Officer of Inspection detailed by the United States Government.

THE ASTRONOMICAL, METEOROLOGICAL AND SEISMOLOGICAL OBSERVATORY

JEROME SIXTUS RICARD, S. J.,
Director, Forecaster and Seismologist.

Student Assistant—William Henry Osterle.

Commercial Department

COMMERCIAL DEPARTMENT

These courses require a definite amount of work, but the time for completion depends entirely upon the ability and the application of the student. Free range is given to individual effort. The course of study is so arranged that studies in other departments of the University may be pursued also. The general and the technical subjects are combined to give mental discipline and general culture, at the same time preparing the student for the practical affairs of business. All students in the Department are required to attend one of the English courses in the Preparatory or High School Department.

Besides written examinations, each candidate for graduation is orally examined by a committee of the Faculty for thirty minutes in all the subjects seen during the past year.

The general provisions regarding Attendance, Examinations, Promotions, Conditions, etc., set forth elsewhere in this catalogue, apply also to this Department.

Upon graduation, each student is given the Commercial Certificate.

First Year.

(1) Elementary Bookkeeping.

One-Half Credit. **Five Hours, First Semester.**

Using from the first, sales-book, purchase-book, cash-book, journal and ledger. Drills in journalizing, statements, business forms. Text: Rowe.

(2) Wholesale Set.

One-Half Credit. **Five Hours, Second Semester.**

With the special features of columnar work, controlling accounts, general ledger and sales ledger, analysis sheets, note books as posting mediums, loose leaf sales book, posting from orders, and valuable drills in aritmetic and commercial paper, several different forms of balance sheets. Text: Rowe.

(3) Business Spelling.

Three-Fifths Credit. **Three Hours, Two Semesters.**

Including a study of roots, prefixes, suffixes, syllabication, diacritical marks, spelling rules, defining words, and their use in sentences. Text: Marshall.

(4) Penmanship and Dictation.

One Credit. **Five Hours, Two Semesters.**

Particular attention is given to position, form, movement and speed. Daily drills are given on various movement exercises, to help get smooth lines, to establish correct pen-holding, to loosen the muscles, to increase the speed, to fix firmly the habit of correct movement, and thus lay the foundation for a good business hand. Speed practice is a special feature of the course. Text: Zaner.

(5) English Essentials and Letter Writing.

Two-Fifths Credit. **Two Hours, Two Semesters.**

Special attention devoted to correcting the students' deficiencies and developing accuracy in grammar, punctuation, the use of words and discrimination of synonyms. The student writes a series of business

letters, in accordance with data and conditions furnished by the instructor who carefully examines, marks for corrections and returns them to the student to be rewritten. Texts: Effective Business Letters, Gardner; Lessons and Exercises in English, Dengler.

(6) Business Arithmetic and Rapid Calculation.

One Credit. **Five Hours, Two Semesters.**

Addition drills, invoice extension, percentage as applied to business problems, profit and loss, commission, trade discounts, insurance, interest by banker's method training the student to solve the various problems with the fewest possible figures, banker's daily balances, saving accounts, exchange, metric system, equations and cash balance, dividends and investments, partitive proportion, partnership and storage. Short practical methods emphasized. Text: Moore and Miner, McIntosh.

Second Year.

(7) Business Practice and Administration.

One-Half Credit. **Ten Hours, Second Semester.**

Here the student learns bookkeeping **practically** by recording the transactions as they arise not knowing beforehand what will take place. They are buying and selling, money to pay and money to receive, credit given and credit allowed; there are checks, drafts, notes, receipts, invoices, statements, etc., to receive, to deliver, and to make record of—every phase of actual business being exemplified. The student must show at all times what he knows. There is a dif-

ferent set of transactions for every student. The Ellis Cabinet-Card System is used.

(8) Commission Set.

One-Half Credit. **Five Hours, First Semester.**

Use of twenty column cash-journal account-sales register, business letters, bill of lading, commission sales book, bill and charge system, card ledger, elementary work in opening and closing corporation accounts and advanced financial statements. Text: Rowe.

(9) Banking.

One-Half Credit. **Five Hours, Second Semester.**

Both cash book and journal methods. Practical training in Bank bookkeeping and the duties of Bank officers and clerks. Clearing-house explained and practically illustrated by the handling of all business papers and commerce followed by practice in two College Banks which clear and balance cash book daily. Exchange, Loan and Collection departments are conducted. Trial balances, statements and remittances to Correspondents are made weekly and Bank Examiner reports regularly. Texts: Rowe, Ellis, Goodyear.

Third Year.

(10) Cost Accountancy.

Three-Tenths Credit. **Three Hours, First Semester.**

Illustrating shop management, voucher system, changing partnership to corporation, reserve and surplus accounts, internal checks, stock books, cost sheets and highly classified trading and financial statements. Text: Rowe.

(11) Electives.

Three-Tenths Credit. **Three Hours, Second Semester.**

Real Estate and Insurance Set, Railway Accounting and Farm Accounting. These sets illustrate the use of insurance policies and registers, preparing and filing deeds and mortgages, leases, protesting, acknowledgments, bill of lading, abstracts of title, railway stationery, Freight Cash Book, Freight Forwarded and Received Book, telegrams, and some entirely new features in farm bookkeeping. Text: Goodyear.

(12) Bookkeeping and Accounting Problems.

One-Fifth Credit. **Two Hours, Second Semester.**

Part Two—Bennett. During these periods the theory of bookkeeping is discussed in all its forms, and demonstrated by practical application. The work is prepared by the student out of class, critically examined by the instructor and returned with corrections marked.

(13) Business Law.

One-Fifth Credit. **Two Hours, First Semester.**

Through problems and quizzes the student is made familiar with all the usual customs and business forms; with contracts, their operation and discharge, sale and bailment of goods, credit and loans, guaranty, negotiable instruments, agency, master and servant, partnerships and joint-stock companies, corporations, real and personal property. Text: Bush.

(14) Auditing.

One-Fifth Credit. **Two Hours, One Semester.**

Work consists of experting books in Business De-

partment, and problem work finished by the instructor, the scope and conduct of an audit, errors of ignorance, fraud and mistake, kinds of audits, their purposes and advantages, duties and qualifications of an auditor, balance-sheet audit, the detailed audit, corporation tax law and depreciation, bank, mercantile and manufacturing audits, investigations, liabilities of auditors and directors, certified public accountant laws and examinations. Text: Montgomery.

(15) Office Practice.

One Credit. **Five Hours, Two Semesters.**

Each student at some time during his course enters and conducts all of the offices, which include two banks, two wholesale houses, commission house, real estate and insurance and freight office. He learns how to use the adding machine in making statements, checking invoices and trial balances, figuring interest and summarizing. Modern methods of bookkeeping are used exemplifying columnar books, controlling accounts, trial balance proofs, loose-leaf ledgers, filing systems and billing machine. He becomes a stockholder and attends business meetings, learning parliamentary usages. Daily cash balances and reports are made, including check figures and figure trial balances.

(16) Shorthand and Typewriting.

One Credit. **Five Hours, Two Semesters.**

The Pitmanic system of shorthand is taught, and as its value to a student is ordinarily measured by his general English education, it is recommended only to the advanced student. The object of the instruction in

typewriting is to impart a correct scientific method of fingering and a skillful, uniform touch, and to train the students in all the details of form and arrangement of transcript. The work includes business letters of all kinds, tabulated statements, articles of agreement, certificates of incorporation, the writing of a will and other legal forms. Texts: Howard-Pitman Manual, Typewriting by the Touch Method, Bell & Wasson.

(17) Stenotypy.

One Credit. **Ten Hours, Two Semesters.**

A course in Stenotypy lasting through both semesters is offered as an alternative for Shorthand. This new method of rapid writing, which does away with the necessity of mastering a system of expressing sounds and words and allows rapid recording with little labor by means of a machine, is taught with thoroughness.

Preparatory Department

HIGH SCHOOL OR PREPARATORY DEPARTMENT

First Year.

(1) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Etymology and Syntax. Text: Pearson, Essentials of Latin. Author: Caesar, Selections. Practice: Themes.

(2) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Etymology and Syntax. Text: Pearson, Essentials of Latin. Author: Caesar, Gallic War. Practice: Themes in Imitation.

(3) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Hanson, Two Years of English Composition. Authors: Macaulay, Lays of Ancient Rome; Scott, Lady of the Lake, Ivanhoe. Practice: Weekly Compositions.

(4) English.

One-Half Credit. **Five Hours, One Semester.**

Hanson, Two Years of English Composition. Authors: Irving, Sketch Book, Dickens, Christmas Carol. Practice: Weekly Composition.

(5) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Baltimore Catechism thoroughly reviewed. Kinkead's Explanation of the Baltimore Catechism.

(6) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Kinkead's Explanation of the Baltimore Catechism.

(7) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Algebra. Text: Wells' Algebra, from beginning to factors inclusive.

(8) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Algebra. Text: Wells' Algebra, from factors to quadratics inclusive.

(9) History.

One-Half Credit. **Five Hours, One Semester.**

The Ancient Nations, and Greece. Text: Bettens' West's Ancient History.

(10) History.

One-Half Credit. **Five Hours, One Semester.**

Roman History to Charlemagne. Text: Bettens' West's Ancient History.

Second Year.

(11) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Etymology and Syntax reviewed in analysis work. Bennett's Latin Grammar. Author: Caesar, Gallic War, two books; Gunnison & Harley's Edition. Practice: Themes in Imitation.

(12) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Syntax reviewed in analysis work, concluded. Bennett's Latin Grammar. Author: Caesar, Gallic War, two books; Gunnison & Harley's Edition. Practice: Themes in Imitation.

(13) English.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Donnelly's Imitation and Analysis. Henson Two Years of English Composition, 2nd half. Authors: Longfellow, Whittier, Holmes, Lowell, Stevenson, Treasure Island. Practice: Composition. Exercises.

(14) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Donnelly's Imitation and Analysis. Authors: Shakespeare, Julius Caesar; Cooper, The Spy; Parkman, Oregon Trail. Practice: Composition. Exercises.

(15) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Kinkead's Explanation of the Baltimore Catechism, second half.

(16) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Deharbe, Full Catechism of the Christian Religion, Part II.

(17) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Algebra to Quadratics reviewed. Text: Wells' Algebra.

(18) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Algebra from Quadratics to end. Text: Wells' Algebra.

(19) History.

One-Half Credit. **Five Hours, One Semester.**

Medieval History. West's Medieval and Modern History. Corrected by the teacher when necessary.

(20) History.

One-Half Credit. **Five Hours, One Semester.**

Modern History. Text: West's Medieval and Modern History. Corrected by the teacher when necessary.

Third Year.

(21) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Syntax. Bennett's Latin Grammar. Author: Cicero, first three orations against Catiline. Practice: Themes in Imitation.

(22) Latin.

One-Half Credit. **Eight Hours, One Semester.**

Precepts: Syntax. Bennett's Latin Grammar. Author: Cicero's Fourth Oration against Catiline, the orations Pro Archia and Pro Marcello. Practice: Themes in Imitation. Original Exercises.

(23) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Text: Scott & Denney's New Composition-Rhetoric. Authors: Gray, Poems, Coleridge, Ancient Mariner; Arnold, Sohrab and Rustum. Practice: Composition, Written exercises.

(24) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Text: Scott & Denney's New Composition-Rhetoric. Authors: Shakespeare, Merchant of Venice. Hughes, Tom Brown's School Days, Lincoln's Speeches. Practice: Composition, Written Exercises.

(25) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Deharbe, Full Catechism of Christian Religion, Part III.

(26) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Deharbe, Full Catechism of Christian Religion, Part I.

(27) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Plane Geometry. Text: Wentworth, Plane Geometry.

(28) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Plane Geometry. Text: Wentworth, Plane Geometry.

(29) History.

One-Half Credit. **Five Hours, One Semester.**

History of England. Text: Cheyney, Short History of England.

(30) History.

One-Half Credit. **Five Hours, One Semester.**

History of England. Text: Cheyney, Short History of England.

(31) Greek.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Etymology and Syntax. Text White's First Greek Book. Practice: Themes.

(32) Greek.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Etymology and Syntax. Text: White's

First Greek Book. Xenophon's Anabasis, two books; Lucian's Dialogues. Practice: Translation of sentences based on the authors.

Fourth Year.

(33) Latin.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Syntax. Authors: Cicero, De Senectute. Virgil, Three Books. Practice: Themes in Imitation. Original Exercises. Bradley's Arnold's Latin Composition. Easy Latin Conversation.

(34) Latin.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Prosody. Authors: Cicero, Narrations, Virgil, Three Books. Practice: Themes in Imitation. Original Exercises. Bradley's Arnold's Latin Prose Composition. Easy Latin Conversation.

(35) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Text. Canby & Opdycke. Authors: Macaulay, Johnson and Goldsmith, Tennyson, Idylls of the King. Practice: Composition. Exercises in simpler forms of verse.

(36) English.

One-Half Credit. **Five Hours, One Semester.**

Precepts: Text. Canby & Opdycke. Authors: Dickens, A Tale of Two Cities, Shakespeare's Richard III; Browning, Cavalier Tunes. Practice: Composition. Exercises in simpler forms of verse.

(37) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Gibbons, Faith of Our Fathers, first half.

(38) Religion.

One-Fifth Credit. **Two Hours, One Semester.**

Christian Doctrine. Text: Gibbons, Faith of Our Fathers, second half.

(39) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Solid Geometry. Text: Wentworth, Plane and Solid Geometry.

(40) Mathematics.

One-Half Credit. **Five Hours, One Semester.**

Plane Trigonometry. Text: Wentworth, Plane Trigonometry.

(41) History.

One-Half Credit. **Five Hours, One Semester.**

History of the United States. Text: Muzzey, American History.

(42) Civil Government.

One-Half Credit. **Five Hours, One Semester.**

The Government of the village, town and city. Activities and duties of the citizen. The State and Federal Governments. Text: Garner's American Government.

(43) Physics.

One-Half Credit. **Five Hours, One Semester.**

A course in elementary Physics with copious laboratory experiments. Text: Milliken & Gale, First Course in Physics. Milliken & Gale Laboratory Course in Physics.

(44) Physics.

One-Half Credit. **Five Hours, One Semester.**

A continuation and completion of Elementary Physics. Text: Milliken & Gale, First Course in Physics. Milliken & Gale, Laboratory Course in Physics.

(45) Greek.

One-Half Credit. **Five Hours, One Semester.**

Review of Etymology and Syntax: White's Beginner's Greek Book. Author: Homer, The First and Second Book of the Iliad. Practice: Exercises in translating from English into Greek.

(46) Greek.

One-Half Credit. **Five Hours, One Semester.**

Etymology and Syntax. Text: White's Beginner's Greek Book. Author: Homer, The Fifth and Sixth Books of the Iliad. Practice: Exercises in translating from English into Greek.

GENERAL PROVISIONS FOR HIGH SCHOOL OR PREPARATORY DEPARTMENT.

Greek is required only for those students who intend to proceed to the degree of Bachelor of Arts.

Physics is required of students preparing to enter the College of Engineering and the College of General Science.

Commercial branches (twenty hours) may by special arrangement be taken after the first year of the preparatory school. This is not, however, recommended in the case of students who intend to enter University courses.

Modern Languages (five hours) may be elected during the last two years of the preparatory course.

For information as to Written Work, Attendance, Examinations, Promotion, Conditions, Failures, etc., see **"General Provisions Regarding Scholarship and Standing," elsewhere in this catalogue.**

Military Training and Drill are required of all students. See page 180.

HIGH SCHOOL OR PREPARATORY DEPARTMENT

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
Subject	Hrs.	Sublect	Hrs.	Subject	Hrs,	Subject	Hrs.
Latin	8	Latin	8	Latin	8	Latin	5
English	5	English	5	English	6	English	5
Religion	2	Religion	2	Religion	2	Religion	2
Algebra 1st year	5	Algebra 2d year	5	Plane Geometry	5	Solid Geometry 1st sem.	5
Ancient History	5	Modern and Medieval History	5	History of England	5	Plane Trigonometry 2d sem.	5
		*Commerc'l Subjects	20	*Greek	5	*Greek	5
				°Mod. Language	5	Civics, 1st sem.	5
				°Commerc'l Subjects	20	History of U. S. 2d sem.	5
						†Physics	5
						°Mod. Language	5
						°Commerc'l Subjects	20

† Prerequisite for Engineering Courses.

* Required from students preparing for A. B. in this University.

° Elective.

UNIVERSITY EVENTS

INAUGURATION OF THE RESERVED OFFICERS TRAINING CORPS.

SUNDAY, JAN. 20, 1918.

Afternoon Exercises.

Battalion Review .....3:30 P. M.

Address .....His Grace, Edward J. Hanna, D. D.
.....Archbishop of San Francisco

Address .....Captain Joseph P. McQuaide, Chaplain U. S. A.

Military Benediction of the Blessed Sacrament.....
.....Rev. Richard A. Gleeson, S. J.

Retreat.

Evening Exercises.

Address .....Hon. Delphine M. Delmas

Original Military Skit,.....“A Military Day at Santa Clara”

“I Hate to Get Up in the Morning”.....Fred J. Moran

Reveille, Exercises .....The Company

“It’s a Long Way to Berlin”.....Alfred Ferrario

Flag Raising.

“We’re Going to Take the Sword Away from William”....
.....Louis A. Bergna

Drill .....Capt. William Muldoon and Company

“When Yankee Doodle Learns to Parley Vous Francais”
.....Harry Wadsworth

Awkward Squad .....
Capt. O’Neil, Privates Michaels, G. O’Connor, Whelan, Ferrario.

RYLAND DEBATE.

University of Santa Clara, Tuesday Evening, March 19, 1918
University Auditorium.

PROGRAM.

Operatic Selections .....Berry
University Band.
Introductory.....Mr. James P. Sex, Chairman

THE QUESTION: Resolved: That the United States should permanently operate the railroads after the war..

AFFIRMATIVE — PHILALETHIC SENATE
Senator Gerald Morley Desmond
Senator Edward Lorigan Nicholson
Senator Daniel James Ryan

NEGATIVE — HOUSE OF PHILHISTORIANS
Representative Eugene Richard Jaeger
Representative James Bartholomew O'Connor
Representative Francis Michael Conneally

JUDGES.

The following gentlemen kindly consented to act as judges:

The Rev. W. H. Culligan, S. J.
Mr. James P. Sex, Chairman.
Hon. Wm. A. Beasly
Mr. Charles M. O'Brien
Mr. Clarence C. Coolidge
Mr. Owen D. Richardson.

And awarded the debate to the Philalethic Senate.

Humoresque for Bass, The Devil and the Deep Blue Sea..King
Solo by Mr. Alfred A. Ferrario.....University Band
Final March, Rolling Thunder .....Fillmore
University Band.

ELOCUTION CONTEST FOR OWL AND JUNIOR PRIZES TUESDAY EVENING, APRIL 16, 1918.

For the JUNIOR PRIZES, High School Classes

Operatic Selections .....Roberts
University Band

Introductory Remarks .....Mr. Robert E. Tremaine

Why We Are at War .....Secretary Lane
John May Burnett, 1st High

Lament of Antony Over Caesar .....Shakespeare
John Patrick Dempsey, 2nd High

Flag Day Address .....President Wilson
Fenton David Williamson, 2nd High

The Fool .....Service
Francis Aloysius Riordan, 3rd High

Hawaiian Songs, Medley .....Bigelow
University Band

The Causes of the War .....D. M. Delmas, '63
Edwin Austin Heafey, 4th High

In Memory of My Brother .....Ryan
Clarence Raphael Sullivan, 4th High

The Old Surgeon's Story .....Donnelly
Louis James Trabucco, 4th High

Stubbins' Oration .....Cowan
Emmet William Gleeson, 2nd High

Jean Desprez .....Service
Fred John Moran, 4th High

Tone Poem, A Night in June .....King
University Band

For the OWL PRIZES, Colleges of Letters and Science

The Great Return .....Thomas Alexander Sperry, Freshman

The Engineer in the War ....Thomas Joseph Ford, Sophomore

Christianity a Failure?..Francis Michael Conneally, Sophomore

Gaiety Polka .....Hartley

University Band

Baritone Solo by Mr. R. E. Tremaine

Greater Love Than This .....

.....Benjamin Christie Mickle, Sophomore

The Drummer Boy of Marengo....John Charles Murphy, Senior

Democracy March .....Jones

University Band

The following gentlemen kindly consented to act as judges

The Rev. James J. Hayes, S. J. M. E. Griffith, Esq.

W. J. Cramsie, Esq. J. J. Jones, Esq.

M. J. Rankin, Esq.

SIXTY-SEVENTH

ANNUAL COMMENCEMENT

WEDNESDAY AFTERNOON, MAY 22ND, 1918,

At Two o'clock

UNIVERSITY AUDITORIUM

PROGRAM

Overture to Norma .....Belllni

University Band

Award of Prizes.

Conferring of Degrees.

Morceau Characteristique Tale of The Mission Bells.....

.....S. J. Mustol

Valedictory .....Albert Aloysius Quill

Address .....John J. O'Toole, '87

"Star Spangled Banner" .....

University Band

Mareh, "Over the Top" .....Cohan

University Band

DEGREES CONFERRED

Juris Doctor

ORVIS HUMPHREY SPECIALE, LL.B. '17
RONALD GRANT STEWART, A. B. '17

Bachelor of Laws

VICTOR ANTHONY CHARGIN, A. B. '14
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JOHN BROOKE MOHUN
JOHN CHARLES MURPHY
EDWARD LORIGAN NICHOLSON
ALBERT ALOYSIUS QUILL
DANIEL JAMES RYAN

Bachelor of Science

CYRIL ABBOTT COYLE
PAUL EDWARD DOLEN
HILDING EDMOND JOHNSON
RUDOLPH JOHN SCHOLZ

Bachelor of Science and Electrical Engineering

PAUL COLIN CAMPBELL
HOWARD SADOC KELLEY

Bachelor of Science in Mechanical Engineering

JOAQUIN LALINDE y MATUS
PETER JOHN McNULTY

Certificate in Chemistry

STAFFORD ISAAC KEESLING

Commercial Certificate

HORACE WALL MAGGETTI

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THE SENIOR NOBILI MEDAL.

An annual medal of the value of $60, founded in 1876, by Joseph A. Donahue, Esq., of San Francisco, in honor of the First President of Santa Clara, the Rev. John Nobili, S. J., to be given to "the student who shall be deemed first in morals, obedience, and application to study," was awarded to

RUDOLPH JOHN SCHOLZ

Next in Merit:
JOHN IGNATIUS BRADLEY

Distinguished:

Albion J. Howell
Cyril Abbot Coyle
Henry Charles Veit
Brian Eugene Gagan
Louis Francis Buty
Edward Armand White
John Franklin Brooke, Jr.
Joseph Adolfo Vergara

THE JUNIOR NOBILI MEDAL.

An annual medal of the value of $25, founded by Michael H. Kelly, Esq., of San Francisco, to be given to the "student in the junior division who shall be deemed first in morals, obedience and application to study," was awarded to

EDWIN AUSTIN HEAFEY

Next in Merit:
FENTON DAVID WILLIAMSON

Distinguished:

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August Joseph O'Connor
Francis Cadmus Damrell
Louis Washington Lettunich
John McKee Chase
John Kellogg Lipman
George Walter Ryan

THE SILVER MEDAL FOR CONDUCT AND APPLICATION

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RESIDENT UNIVERSITY STUDENTS,
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Francis Xavierr G. Hovely
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Oliver Michael Kisich
James Bennett Kaney
Herman Charles Dieringer
Caesar Joseph Manelli
Francis Michael Conneally
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THE SILVER MEDAL FOR CONDUCT AND APPLICATION

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Henry Oliver McCormick
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NON-RESIDENT UNIVERSITY STUDENTS,
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Eugene Richard Jaeger
Peter Francis Morettini
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Richard Ignatius McCarthy
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Frank Benedict Maloney
Richard Hume Williams
Henry Moise Robidoux
Frederic Aloysius Brizzolara
John May Burnett
Henry Beaumont Martin
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THE ARCHBISHOP'S MEDAL.

An annual medal of the value of $50, donated by His Grace, Most Rev. Edward J. Hanna, D. D. Archbishop of San Francisco, in memory of his illustrious predecessor, Most Rev. Patrick William Riordan, D. D., 'for the best examination in Christian Doctrine,'' was awarded to

RANDALL OSWALD O'NEILL

Distinguished:

Albert Aloysius Quill
Henry Charles Veit
James Bennett Kaney
Martin Murtha Murphy
Edwin Austin Heafey
William Kevin Casey

THE RYLAND PRIZES.

Annual prizes of $50, $25 and $15, founded in 1897 by the Hon. Caius T. Ryland of San Jose, and increased by his son John Wallace Ryland, Esq., B. S. '77, LL.B. '12, to be given "to the student who may be deemed by the University most fit for the prize," have been set aside for the students who shall be judged to have distinguished themselves most in the Ryland Annual Debate between the Philalethic Senate and the House of Philhistorians, and were awarded as follows:

First Prize, Fifty Dollars.

JAMES BARTHOLOMEW O'CONNOR

Second Prize, Twenty-Five Dollars.

EDWARD LORIGAN NICHOLSON

Third Prize, Fifteen Dollars.

DANIEL JAMES RYAN

Distinguished:

Gerald Morley Desmond
Eugene Richard Jaeger

THE DONOVAN PRIZES.

Prizes donated by Colonel Joseph L. Donovan, U. S. Army, Ret., C. & M. E., of the Faculty of the College of Civil Engineering, were awarded as follows:

For the best examination in Sophomore Engineering Mathematics, a purse of Twenty Dollars, awarded to

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Distinguished:

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For the best examination in Freshman Engineering Mathematics, a purse of Fifteen Dollars, awarded to

JOSEPH ADOLFO VERGARA

THE BARCHI PRIZES.

Annual prizes of $15 and $10 founded by Joseph M. Durney, Esq., of San Francisco, in honor of the Rev. Caesar A. Barchi, S. J., were given this year for the best paper in the Mathematical Contest, were awarded to

First Prize, Fifteen Dollars.

PETER FRANCIS MORETTINI

Second Prize, Ten Dollars was divided between

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THE OWL MEDAL.

An annual prize of $25, founded by the directors of the former University Magazine, "The Owl", to be given to the winner of the Annual Oratorical Contest in the University course, was awarded to

JOHN CHARLES MURPHY

Distinguished:

Thomas Joseph Ford
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THE JUNIOR ELOCUTION MEDAL.

Annual prizes of $15 and $10 for the winners of the Elocution Contest in the High School Department, were awarded to

First Prize, Fifteen Dollars.

LOUIS JAMES TRABUCCO

Second Prize, Ten Dollars.

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Distinguished:

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THE DONOHOE MEDAL.

Annual prizes of $25, $15 and $10 to be awarded to the students who shall show the greatest progress in the study of Latin and Greek during the session, were set aside this year for the best Latin composition and were awarded as follows:

First Prize, Twenty-Five Dollars.

RICHARD IGNATIUS McCARTHY

Second Prize, Fifteen Dollars

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Third Prize, Ten Dollars

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Annual prizes of $15 and $10, founded in 1894 in memory of Daniel J. McCann, B. S. '84, were set aside this year for the best short story, and were awarded as follows:

First Prize, Fifteen Dollars.

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Michael Marie Charles de Cazotte .....Cello
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Damrell, Francis Cadmus	4 High	Res.	Modesto

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Henry, John Joseph	2 High	Res.	Douglass, Wy.
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Hovley, Francis Xavier George	Soph. Let.	Res.	Brawley
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The 68th Session

Of the University of Santa Clara begins
on Monday

August 19th, 1918

University of Santa Clara

Ordinary Honors

and

Distinctions

SANTA CLARA, CALIFORNIA
MAY, 1918

Ordinary Honors and Distinctions

It is customary at Santa Clara to encourage the students who have succeeded best in their classes by some public recognition of merit. During the school year the list of those who have distinguished themselves in their various classes is read publicly every month in the University Hall.

The following list of ordinary honors and distinctions comprises the names of those who have attained the highest average during the entire school year. First and Second Honors are awarded to the best two in such class. A distinction requires a yearly average of 85 per cent., or over; in the Institute of Law the average required is 90 per cent.

Decorations are awarded as follows:

One first honor.....a purple ribbon.
Two first honors.....two purple ribbons.
Three first honors.....a gold ribbon.
One second honor.....a red ribbon.
Two second honors.....a purple ribbon.

THIRD YEAR LAW.

Victor Anthony Chargin—First Honors in Probate Practice, Bills and Notes.
Second Honors in Insurance.
Distinguished in Sales.

Leo Louis Gairaud—First Honors in Sales, Partnership.

Theodore William Ryan—Second Honors in Probate Practice.

Distinguished in Sales.

Ronald Grant Stewart—First Honors in J. D. Course, Insurance.

SECOND YEAR LAW.

Hilding Edmond Johnson—First Honors in Property II.

Albert Aloysius Quill—Distinguished in Bills and Notes.

Rudolph John Scholz—Second Honors in Sales.

FIRST YEAR LAW.

William Darrell Daly—First Honors in Property I, Contracts.

Brian Eugene Gagan—First Honors in Common Law Pleading.

Second Honors in Torts, Contracts.

William Ward Sullivan—First Honors in Torts.

Second Honors in Common Law Pleading, Property I.

Distinguished in Contracts.

SENIOR LETTERS AND SCIENCE.

Honors and Distinctions are given in the following departments to those who maintain an average of 85 or more.

Lemuel Rose Bolter—Distinguished in History of Philosophy.

Cyril Abbot Coyle—Distinguished in Political Economy, History of Philosophy, Philosophy of Religion.

Paul Edwin Dolen—Second Honors in Biology Lecture.
Distinguished in Biology Laboratory, Organic Chemistry Lecture and Laboratory, Philosophy; History of Philosophy.

John Charles Murphy—Distinguished in Philosophy, Political Economy, History of Philosophy.

Edward Lorigan Nicholson—Distinguished in Philosophy, Political Economy, History of Philosophy, Philosophy of Religion.

Albert Aloysius Quill—First Honors in Philosophy of Religion.
Second Honors in Philosophy, History of Philosophy, Political Economy.

Daniel James Ryan—Distinguished in Philosophy, History of Philosophy, Political Economy.

Rudolph John Scholz—First Honors in Philosophy, Political Economy, History of Philosophy.
Second Honors in Philosophy of Religion.

Robert Edward Tremaine—Distinguished in Political Economy.

JUNIOR LETTERS AND SCIENCE.

Frank Adolph Camarillo—Distinguished in Political Economy, Philosophy, Philosophy of Religion.

Darrell William Daly—Second Honors in Philosophy, Philosophy of Religion.
Distinguished in Political Economy.

Demetrio Diaz—Distinguished in Political Economy.

Brian Eugene Gagan—Distinguished in Political Economy, Philosophy.

Norbert Joseph Korte—Distinguished in Political Economy, History of Philosophy, Philosophy of Religion.

William Ward Sullivan—First Honors in Philosophy of Religion, Philosophy.

Distinguished in Political Economy, History of Philosophy.

SOPHOMORE LETTERS AND SCIENCE.

John Ignatius Bradley—First Honors in English Literature, History.

Second Honors in Physics Laboratory, Religion, Latin Literature and Composition.

Distinguished in Physics Laboratory, English Composition, Analytic Geometry.

Louis Francis Buty—First Honors in French, Spherical Trigonometry.

Distinguished in Elementary Law, Religion, English Literature and Composition, Latin Literature, Chemical Loboratory.

William Kevin Casey—Second Honors in Elementary Law, English Composition.

Distinguished in Religion, English Literature, Latin Literature.

Francis Michael Connealley—Second Honors in Organic Chemistry Lecture and Laboratory.

Distinguished in Religion, English Literature and Composition.

Joseph Wulffing Henderson—First Honors in Elementary Law.

Francis Xavier George Hovley—Distinguished in Elementary Law, Religion, English Literature and Composition, Oratory, Chemical Lecture.

Albion James Howell—First Honors in Biology Lecture and Laboratory, Bacteriology Lecture.
Distinguished in Organic Chemistry Lecture, English Literature and Composition.

Eugene Richard Jaeger—Distinguished in Elementary Law, Physics Laboratory, Religion, English Composition, Oratory.

Alvin Charles McCarthy—Distinguished in Elementary Law, Physics Laboratory, Oratory.

Benjamin Lincoln McCoy—First Honors in Oratory.
Distinguished in Elementary Law.

Clarence Bloom Maggetti—Second Honors in Analytic Geometry.
Distinguished in Physics Laboratory, English Composition.

Benjamin Christy Mickle—First Honors in Geology and Mineralogy.
Distinguished in Elementary Law, English Literature and Composition, Oratory.

Peter Francis Morettini—First Honors in Analytic Geometry, Greek Literature and Composition, Physics Lecture and Laboratory, Religion, Latin Literature and Composition.
Second Honors in English Literature.
Distinguished in Elementary Law, English Composition, Oratory.

James Bartholomew O'Connor—Second Honors in Oratory.

Distinguished in Elementary Law, Physics Laboratory, Religion, English Literature and Composition.

Randall Oswald O'Neill—Distinguished in Elementary Law, Physics Laboratory, Religion, English Literature and Composition.

Benjamin Lipman Schutz—Distinguished in Biology Laboratory.

Joseph Milo Taber, Jr.—Second Honors in Biology Laboratory.

Henry Charles Veit—First Honors in German, Spanish, Organic Chemistry Lecture and Laboratory.

Distinguished in Elementary Law, Religion, English Literature and Composition.

Harry Albert Wadsworth—Second Honors in English Composition.

Distinguished in Elementary Law, English Composition, Oratory.

FRESHMEN LETTERS AND SCIENCE.

Casimir Andrew Antonioli—First Honors in Plane Trigonometry.

Second Honors in Spanish, English Composition.

Distinguished in Religion, English Literature, History.

Jerome Coolidge Bean—Second Honors in Advanced Algebra, Spherical Trigonometry.

Distinguished in Religion.

Kenneth Herman Berg—Distinguished in Religion, History.

John Franklin Brooke—Second Honors in Greek Literature and Composition.
Distinguished in Religion.

Edmund Zan Coman—First Honors in French.
Distinguished in Religion, English Literature and Composition, Latin Literature, Spherical Trigonometry.

William Morley Desmond—First Honors in Interpretation.

Frederick Edward Farmer—Distinguished in Religion, Latin Literature, English Composition.

Joseph Robert Fitzpatrick—Distinguished in Religion, English Literature and Composition, History.

Leo Sanor Fox—First Honors in Chemistry Laboratory.
Second Honors in Religion.
Distinguished in Geology and Mineralogy.

James Bennett Kaney—First Honors in English Literature.
Second Honors in History.
Distinguished in Religion, English Composition, Chemistry Laboratory.

Porter Thomas Kerchkoff—Distinguished in Religion.

Oliver Michael Kisich—First Honors in Religion, English Composition.
Second Honors in Interpretation, Latin Literature.
Distinguished in English Literature, History, Chemistry Lecture.

Richard Ignatius McCarthy—First Honors in Advanced Algebra, Greek Literature and Composition, Latin Literature.

Second Honors in English Literature ond Composition.

Distinguished in Religion, History, Spherical Trigonometry, Chemistry Lecture.

Delos Blackie Mansfield—Second Honors in French.

Distinguished in Spanish, History.

John Wilfred Murphy—Distinguished in Religion, English Literature, History.

Thomas Alexander Sperry—Distinguished in Religion.

Martin Simon Walsh—Distinguished in Religion, English Literature, Interpretation.

Edward Armand White—Distinguished in Religion, English Literature and Composition, Latin Literature and Composition.

Benjamin Tully Williams—Second Honors in Latin Composition.

SENIOR ENGINEERING.

Howard Sadoc Kelley—First Honors in Alternating Currents.

Second Honors in Contracts and Specifications, Review of Technical Literature.

Joaquin Lalinde y Matus—First Honors in Telephony, Contracts and Specifications.

Peter John McNulty—First Honors in Review of Technical Literature.

Second Honors in Telephony.

JUNIOR ENGINEERING.

Leo Murtha Martin—First Honors in Machine Design, Electric Laboratory, Surveying, Material Testing, Differential Equations, Electricity, Power Plant Engineering, Foundry.

Howard Francis Nulk—Second Honors in Power Plant Engineering, Foundry, Machine Design, Electric Laboratory.

Manuel Julian Selaya—Distinguished in Foundry, Electric Laboratory.

William Keith Volkers—Second Honors in Electricity. Distinguished in Foundry.

SOPHOMORE ENGINEERING.

Albert John Brown—Second Honors in Woodwork, Machine Drawing, English Literature and Composition.
Distinguished in Physics Laboratory.

Herman Charles Dieringer—First Honors in Woodwork, Machine Drawing, English Literature and Composition.
Second Honors in Physics Laboratory.

Robert Don, Jr.—First Honors in Kinematics.

Harold James Flannery—First Honors in Topographical Drawing.
Distinguished in Physics Laboratory, Geology and Mineralogy.

Thomas Joseph Ford—Second Honors in Topographical Drawing.

Emil John Niclas, Jr.—Distinguished in Physics Laboratory.

FRESHMAN ENGINEERING.

William Thomas Bassett—Distinguished in Drafting.

Alfred Laurence Guichon—First Honors in Drafting.
Distinguished in English Composition.

William Jaspar Koch—First Honors in Religion, English Composition.
Distinguished in English Literature, French, Drafting.

Wilkie Courter Mahoney—Second Honors in English Literature and Composition.

Caesar Joseph Mannelli—Second Honors in French.
Distinguished in Drafting..

William Henry Osterle—First Honors in Spanish, Chemistry Lecture, Review of Engineering Industries, English Literature, Descriptive Geometry, Advanced Algebra and Trigonometry.
Second Honors in Religion, Analytic Geometry, Chemical Laboratory, Geology and Mineralogy.
Distinguished in Drafting.

Joseph Adolpho Vergara—First Honors in Analytic Geometry, Descriptive Geometry.
Second Honors in Drafting, Advanced Algebra and Trigonometry, Chemistry Lecture.

FOURTH YEAR HIGH SCHOOL.

Tullio Anthony Argenti—Second Honors in Plane Geometry, Latin Literature.
Distinguished in Physics Laboratory, Religion, English Literature, History.

Charles Joseph Caramella—Distinguished in Physics Laboratory.

Claude Apollinaire Dausse—Distinguished in Physics Laboratory.

Francis Cadmus Damrell—Distinguished in History.

Charles Marshall Frederick Ducoing—First Honors in Latin Literature, Solid Geometry, Plane Trigonometry, Plane Trigonometry, Latin Composition.

Second Honors in Physics Lecture.

Distinguished in Physics Laboratory, English Literature, Religion.

Frank Leal da Roza—Distinguished in Physics Laboratory.

Charles Bertrand Donlon—Distinguished in Plane Geometry.

Alfredo Angelo Ferrario—Second Honors in Physics Laboratory.

Distinguished in Physics Lecture.

Harry Joseph Gassett—Second Honors in Religion, English Literature and Composition, Trigonometry, History, Latin Composition.

Distinguished in Physics Lecture, Latin Literature.

James Anthony Grace—Distinguished in Physics Lecture and Laboratory.

Edwin Austin Heafey—First Honors in Religion, English Literature and Composition, History.

Distinguished in Physics Laboratory.

Thomas Mervyn Kaney—Distinguished in English Literature.

John Joseph Morettini—First Honors in Greek Literature and Composition.

Distinguished in Religion, English Literature, Physics Laboratory.

Martin Murtha Murphy—Distinguished in Religion, English Literature and Composition, Physics Laboratory.

Frank Albert Rethers—Distinguished in Physics Lecture and Laboratory.

Leo Edward Shottenhammer—Distinguished in Physics Laboratory.

Clarence Raphael Sullivan—First Honors in Physics Lecture and Laboratory.

Second Honors in Greek Literature and Composition.

Distinguished in Religion, Plane Trigonometry, History.

Cletus Stephen Sullivan—Distinguished in Religion, English Literature, Greek Literature and Composition.

Louis James Trabucco—First Honors in Elocution.

Distinguished in Physics Lecture.

Richard John Williams—Distinguished in Physics Laboratory.

THIRD YEAR HIGH SCHOOL.

Michael Marie Charles de Cazotte—Second Honors in Greek Literature.

Frank Clement de Lemos—First Honors in Greek Literature and Composition.

Distinguished in Religion, English Literature and Composition, Plane Geometry.

Austin Kellogg Enright—Distinguished in Plane Geometry.

Otis Francis Forge—First Honors in Religion, English Literature and Composition, Latin Literature and Composition, Spanish, History, Plane Geometry.

Robert Edward Grady—First Honors in Spanish.
Second Honors in Religion.
Distinguished in English Literature and Composition, History.

George Richard Harney—Second Honors in Algebra.

John Green Hiller—First Honors in Elocution.
Second Honors in English Literature and Composition.
Distinguished in Religion, Plane Geometry and History.

Dominic James Leonard—Second Honors in Elocution and History.
Distinguished in Religion, English Literature and Composition.

George Patrick Merrill—Distinguished in Religion and English Composition.

John Willis Mollen—Distinguished in Religion, English Literature and Composition, Latin Literature and Composition.

James Edward Neary—Distinguished in English Composition.

Frederick Henry Teague—Distinguished in English Composition.

Francis Brady Tinney—Distinguished in Religion, English Literature, Plane Geometry and History.

Jesse LeRoy Woods—Distinguished in Elocution.

SECOND YEAR HIGH SCHOOL.

Leland George Cerrutti—Distinguished in Religion, English Literature and Composition, Latin Literature.

John McKee Chase—Second Honors in Latin Literature and Composition.

Distinguished in Religion, English Literature and Composition.

John Patrick Dempsey—Second Honors in English Composition and Elocution.

Distinguished in Religion, English Literature, Latin Literature and Composition.

Michael Delanty Goodbody—Distinguished in Religion, and Elocution.

John Joseph Henry—Distinguished in Religion and Elocution.

Victor Larrey—Distinguished in Religion.

John Kellogg Lipman—First Honors in English Composition.

Second Honors in Latin Literature and Composition, History, Algebra.

Distinguished in Religion, English Literature, Elocution.

John William Loftus—Distinguished in Religion, English Literature and Composition.

Alfred Victor Mainero—First Honors in Religion, English Literature, Latin Literature and History.
Second Honors in Latin Composition.
Distinguished in English Composition, Algebra.

Frank Benedict Moloney—Distinguished in Religion, English Literature and Composition, History.

John Barton O'Brien—Distinguished in Religion, English Literature and Composition, Elocution.

August Joseph O'Connor—First Honors in Elocution.
Second Honors in Religion.
Distinguished in English Literature and Composition, History.

James Dennis O'Sullivan—Distinguished in Religion, English Literature and Composition, Elocution.

Henry Moise Robidoux—Distinguished in Religion, English Literature and Composition, Elocution, Algebra.

George Walter Ryan—Distinguished in Religion, English Literature and Composition, Elocution, History, Algebra.

Richard Hume Williams—First Honors in Algebra.
Distinguished in Religion, English Literature and Composition, Latin Literature and Composition, History.

Fenton David Williamson—Second Honors in English Literature.
Distinguished in English Composition, Elocution and History.

FIRST YEAR HIGH SCHOOL, DIVISION A.

Frederick Aloysius Brizzolara—First Honors in English Literature and Composition, Religion, Elocution, Latin Literature and Composition, and Algebra.

Thomas Lawrence Comyns—Second Honors in English Composition and Elocution.

Edward Lloyd Rose—Second Honors in Religion, English Literature.

FIRST YEAR HIGH SCHOOL, DIVISION B.

Francis Joseph Brady—Second Honors in English Composition.
Distinguished in English Literature, Religion.

John May Burnett—First Honors in Latin Literature and Composition, History.
Second Honors in Algebra.
Distinguished in Elocution.

Theodore Joseph Hageman, Jr.—Second Honors in Latin Literature.
Distinguished in Algebra, Latin Composition.

Milton Alexander Huot—Second Honors in History.

James Gregory Korte—Distinguished in Algebra.

Thomas Connor Lynch—Distinguished in English Composition.

Henry Beaumont Martin—First Honors in Elocution.

Lloyd Benedict Nolan—Second Honors in Elocution.
Distinguished in English Composition.

John Trezevant Somavia—First Honors in Algebra.

Second Honors in Latin Composition, English Literature, and Religion.

Distinguished in Latin Literature, History and English Composition.

John Frederick Symons—Distinguished in English Composition.

Howard Edward Wallace—First Honors in English Literature and Composition, Religion.

Distinguished in Algebra.

COMMERCIAL DEPARTMENT.

Claude Apollinaire Dausse—Distinguished in Bookkeeping.

Martin William Judge—Second Honors in Office Practice.

Distinguished in Bookkeeping.

Victor Larrey—First Honors in Commercial Arithmetic.

Second Honors in Bookkeeping.

Distinguished in Stenotypy, Office Practice.

Mark McLaughlin—First Honors in Commercial English.

Distinguished in Commercial Arithmetic.

Horace Wall Maggetti—Distinguished in Bookkeeping, Banking.

George Patrick Merrill—First Honors in Bookkeeping, Writing, Stenotypy.

Distinguished in Office Practice.

John James O'Neill—Second Honors in Writing.

Distinguished in Commercial Arithmetic, Stenotypy, Office Practice.

Joseph Aloysius Pipes—Second Honors in Commercial Arithmetic.

Raymond Leo Smith—Second Honors in Banking.
Distinguished in Stenotypy.

Theodore Charles Viault—First Honors in Office Practice.
Second Honors in Stenotypy.